Jewellery Starter Kit GlassCas



COMBINED SAFETY DATA SHEET

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GlassCast 10/50 Epoxy Casting Resin

Version 6.0 SDB_GB

Revision Date 12.11.2020

Print Date 16.11.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier Trade name	: GlassCast 10/50 Epoxy Casting Resin
1.2 Relevant identified	uses of the substance or mixture and uses advised against
Use of the Substance/Mixture	: Casting, Electrical Insulation
1.3 Details of the supp	lier of the safety data sheet
Company name:	Easy Composites Ltd
	Unit 39, Park Hall Business Village
	Longton, Stoke on Trent
	Staffordshire
	ST3 5XA
	United Kingdom
Tel:	+44 (0) 1782 454499
Email:	sales@easycomposites.co.uk
1.4 Emergency t	ene number +44 (0) 1782 454499
	(office hours only)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)		
Skin irritation, Category 2	H315: Causes skin irritation.	
Serious eye damage, Category 1	H318: Causes serious eye damage.	
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.	
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.	

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)





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Hazard statements	: H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H318	Causes serious eye damage.
	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements	: Prevention:	
	P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/ eye protection/ face protection.
	Response:	
	P305 + P351 + F	P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
	P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
	P362 + P364	Take off contaminated clothing and wash it before reuse.

Hazardous components which must be listed on the label:

bis-[4-(2,3-epoxipropoxi)phenyl]propane

oxirane, mono[(C12-14-alkyloxy)methyl] derivs.

1,4-bis(2,3 epoxypropoxy)butane

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl Sebacate

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature

: Modified epoxy resin

Hazardous components

Chemical name	CAS-No. EC-No./List	Classification (REGULATION	Concentration (%)
	Registration number	(EC) No 1272/2008)	
bis-[4-(2,3-	1675-54-3	Eye Irrit.2; H319	>= 50 - <= 100
epoxipropoxi)phenyl]propane	216-823-5	Skin Irrit.2; H315	



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	01-2119456619-26	Skin Sens.1; H317 Aquatic Chronic2; H411	
oxirane, mono[(C12-14- alkyloxy)methyl] derivs.	- 271-846-8 01-2119485289-22	Skin Irrit.2; H315 Skin Sens.1; H317	>= 10 - < 12,5
1,4-bis(2,3 epoxypropoxy)butane	2425-79-8 219-371-7 01-2119494060-45	Acute Tox.4; H302 Acute Tox.4; H312 Acute Tox.4; H332 Eye Dam.1; H318 Skin Irrit.2; H315 Skin Sens.1; H317 Aquatic Chronic3; H412	>= 5 - < 7
Reaction mass of bis(1,2,2,6,6- pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl- 4-piperidyl Sebacate	1065336-91-5 01-2119491304-40	Skin Sens.1A; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 0,25 - < 0,5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	:	Keep warm and in a quiet place. Show this safety data sheet to the doctor in attendance. Take off all contaminated clothing immediately.
If inhaled	:	Move to fresh air. Keep patient warm and at rest. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician. If breathing is irregular or stopped, administer artificial respiration.
In case of skin contact	:	Wash off immediately with soap and plenty of water. Do NOT use solvents or thinners. If on clothes, remove clothes. If skin irritation persists, call a physician.
In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist. If easy to do, remove contact lens, if worn.
If swallowed	:	Keep at rest. Do not induce vomiting without medical advice. Keep respiratory tract clear.



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	If symptoms persist, call a physician.	
4.2 Most important symptoms and	effects, both acute and delayed	
Symptoms	: irritant effects Redness sensitising effects	
4.3 Indication of any immediate me	dical attention and special treatment ne	eded
Treatment	The first aid procedure should be establi with the doctor responsible for industrial	shed in consultation medicine.
SECTION 5: Firefighting measu	res	
5.1 Extinguishing media		
Suitable extinguishing media	· Foam	

Suitable extinguishing media	: Foam Sand Carbon dioxide (CO2) Water mist	
Unsuitable extinguishing media	: Water spray jet	
5.2 Special hazards arising from	he substance or mixture	
Specific hazards during firefighting	 The pressure in sealed containers can increase under the influence of heat. Cool closed containers exposed to fire with water spray. 	
5.3 Advice for firefighters		
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus Use personal protective equipment.	;.
Further information	 In the event of fire and/or explosion do not breathe fumes. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. 	st

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	: Refer to protective measures listed in sections 7 and 8. Evacuate personnel to safe areas.
	Use personal protective equipment.



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	Ensure adequate ventilation. Inform the responsible authorities in entry into waterways, soil or drains.	case of gas leakage, or of
6.2 Environmental precautions		
Environmental precautions	: Do not allow uncontrolled discharge environment.	of product into the
	Try to prevent the material from enter courses.	ering drains or water
	Local authorities should be advised cannot be contained.	if significant spillages
6.3 Methods and material for cor	ntainment and cleaning up	
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Methods for cleaning up	 Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Pick up and transfer to properly labelled containers.
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6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1	Precautions for safe handling		
	Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms. Avoid inhalation, ingestion and contact with skin and eyes. Wear personal protective equipment. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
	Advice on protection against fire and explosion	:	Keep away from open flames, hot surfaces and sources of ignition.
	Hygiene measures	:	Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.
7.2	Conditions for safe storage, ir	ncl	uding any incompatibilities
	Requirements for storage areas and containers	:	Keep containers tightly closed in a dry, cool and well- ventilated place. Keep in properly labelled containers.
	Advice on common storage	:	Keep away from oxidizing agents, strongly acid or alkaline materials and amines. Keep product and empty container away from heat and

Keep away from food and drink.

sources of ignition.



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Other data	: Stable at normal ambient temperatur	e and pressure.
7.3 Specific end use(s) Specific use(s)	: Consult the technical guidelines for th substance/mixture.	ne use of this

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

bis-[4-(2,3- epoxipropoxi)phenyl]propane	 End Use: Workers Exposure routes: Skin contact Potential health effects: Acute systemic effects, Long-term systemic effects Value: 8,33 mg/kg End Use: Workers Exposure routes: Inhalation Potential health effects: Acute systemic effects, Long-term local effects Value: 12,25 mg/m3 End Use: Consumers Exposure routes: Skin contact Potential health effects: Acute systemic effects, Long-term systemic effects Value: 3,571 mg/kg End Use: Consumers Exposure routes: Ingestion
oxirane, mono[(C12-14- alkyloxy)methyl] derivs.	 Potential health effects: Acute systemic effects, Long-term systemic effects Value: 0,75 mg/kg End Use: Workers Exposure routes: Skin contact Potential health effects: Long-term systemic effects Value: 3,9 mg/kg End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 13,8 mg/m3
Predicted No Effect Concentra	tion (PNEC) according to Regulation (EC) No. 1907/2006:
bis-[4-(2,3- epoxipropoxi)phenyl]propane	: Fresh water Value: 0,006 mg/l Marine water Value: 0,0006 mg/l Intermittent releases Value: 0,018 mg/l Sewage treatment plant Value: 10 mg/l

Fresh water sediment 6 / 16



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Version 6.0 SDB_GB	Revision Date 12.11.2020	Print Date 16.11.2020
oxirane, mono[(C12-14- alkyloxy)methyl] derivs.	Value: 0,996 mg/kg Marine sediment Value: 0,0996 mg/kg Soil Value: 0,196 mg/kg : Sewage treatment plant Value: 10 mg/l Fresh water Value: 0,0072 mg/l Marine water Value: 0,00072 mg/l Fresh water sediment Value: 66,77 mg/kg Marine sediment Value: 6,677 mg/kg Soil Value: 80,12 mg/kg	
8.2 Exposure controls		
Engineering measures Effective exhaust ventilation s effective ventilation in all proc		
Eye protection	 Do not wear contact lenses. Safety glasses with side-shields c Ensure that eyewash stations and the workstation location. 	conforming to EN166 I safety showers are close to
Hand protection Material	: Protective gloves complying with	EN 374.
Skin and body protection	: Protective suit	
Respiratory protection	 Use respiratory protection unless ventilation is provided or exposure that exposures are within recomm In the case of vapour formation us approved filter. Equipment should conform to EN Apply technical measures to comp exposure limits. This should be achieved by a good practically feasible- by the use of 	adequate local exhaust e assessment demonstrates nended exposure guidelines. se a respirator with an 14387 ply with the occupational od general extraction and -if a local exhaust ventilation.
Protective measures	: Avoid contact with skin. Wear suitable protective equipme	nt.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

: liquid

Appearance



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Colour	: colourless	
Odour	: slight	
Odour Threshold	: not determined	
рН	: 4 - 6, 1 %	
Melting point/freezing point	: Not applicable	
Boiling point/boiling range	: >200 °C	
Flash point	: 150 °C	
Evaporation rate	: not determined	
Upper explosion limit	: Not applicable	
Lower explosion limit	: Not applicable	
Vapour pressure	: Not applicable	
Relative vapour density	: not determined	
Density	: 1,12 g/cm3 (25 °C)	
Bulk density	: not determined	
Solubility(ies) Solubility in other solvents	: not determined	
Partition coefficient: n-	: No data available	
octanol/water		
Ignition temperature	: Not applicable	
Auto-ignition temperature	: Not applicable	
Thermal decomposition	: Method: No data available	
Viscosity		
Viscosity, dynamic	: 700 - 1.000 mPa.s (25 °C)	
Viscosity, kinematic	: not determined	
Explosive properties	: Not applicable	
Oxidizing properties	: Not applicable	



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9.2 Other information		
Surface tension	: not determined	
Sublimation point	: Not applicable	

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	: Reacts with the following substances: Bases Strong oxidizing agents
	Avoid amines.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid	: Incompatible with oxidizing agents.
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10.6 Hazardous decomposition products

Hazardous decomposition	:	This product may release the following:
products		Carbon monoxide, carbon dioxide and unburned
		hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : > 2.000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate : > 20 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate : > 2.000 mg/kg Method: Calculation method



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Version 6.0 SDB_GB	Revision Date 12.11.2020	Print Date 16.11.2020
Components:		
his-[4-(2 3-enoxipropoxi)pheny	/Ilnronane:	
Acute oral toxicity	 LD50 (Rat, female): > 2.000 mg/kg Method: OECD Test Guideline 420 GLP: yes 	
Acute dermal toxicity	LD50 (Rat, male and female): > 2.0 Method: OECD Test Guideline 402 GLP: yes	00 mg/kg
Skin corrosion/irritation		
Product:		
<u>Pemerke</u> Ne dete eveileble		
Remarks. No data avaliable		
Components:		
bis-[4-(2,3-epoxipropoxi)pheny	/I]propane:	
Species: Rabbit		
Exposure time: 4 n Method: OECD Test Guideline 4	04	
Result: Skin irritation	04	
GLP: ves		
Serious eye damage/eye irritat	ion	
Product:		
Remarks: No data available		
Respiratory or skin sensitisati	on	
Product:		
Remarks: No data available		
Components:		
bis-[4-(2,3-epoxipropoxi)pheny	/l]propane:	
Test Type: Mouse Local Lymph	Node assay (LLNA)	
Species: Mouse		
Method: OECD Test Guideline 4	29 hu akin contact	
GI P: ves	by skin contact.	
GLF: yes		
Germ cell mutagenicity		
Carcinogenicity		
Reproductive toxicity		
STOT - single exposure		
Product:		

Remarks: Not applicable



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STOT - repeated exposure

Repeated dose toxicity

Product:

Remarks: No data available

Aspiration toxicity

Components:

bis-[4-(2,3-epoxipropoxi)phenyl]propane: No aspiration toxicity classification

Further information

Product: Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	: Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates	: Remarks: No data available

Components:

bis-[4-(2,3-epoxipropoxi)phenyl]propane:

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia (water flea)): 1,7 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,3 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test Method: OECD Test Guideline 211 GLP: yes

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl Sebacate:

M-Factor (Short-term (acute) : 1 aquatic hazard)



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M-Factor (Long-term : (chronic) aquatic hazard)	1	
12.2 Persistence and degradability		
Product:		
Biodegradability :	Remarks: No data available	
Components:		
bis-[4-(2,3-epoxipropoxi)pheny]propane:	
Biodegradability :	Result: Not readily biodegradable. Method: OECD Test Guideline 301F GLP: yes	
12.3 Bioaccumulative potential		
Product:		
Bioaccumulation :	Remarks: No data available	
Components:		
bis-[4-(2,3-epoxipropoxi)pheny]propane:	
octanol/water	pH: 7,1 Method: OECD Test Guideline 117 GLP: yes	
12.4 Mobility in soil		
No data available		
12.5 Results of PBT and vPvB asses	ssment	
Product:		
Assessment :	This substance/mixture contains no comport to be either persistent, bioaccumulative and very persistent and very bioaccumulative (vi 0.1% or higher	nents considered toxic (PBT), or PvB) at levels of
12.6 Other adverse effects		
Product:		
Additional ecological : information	Remarks: An environmental hazard cannot event of unprofessional handling or disposal	be excluded in the I.
SECTION 13: Disposal considera	ations	

Product

: In accordance with local and national regulations. Container hazardous when empty.



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	Do not dispose of with domestic refuse. Do not mix waste streams during collection	on.
Contaminated packaging	: Empty containers should be taken to an a handling site for recycling or disposal.	approved waste

SECTION 14: Transport information

14.1 UN number	
ADR/RID/ADN	: UN 3082
IMDG	: UN 3082
ΙΑΤΑ	: UN 3082
14.2 UN proper shipping name	
ADR/RID/ADN	 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxi)phenyl]propane)
IMDG	 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bis-[4-(2,3-epoxipropoxi)phenyl]propane)
ΙΑΤΑ	: Environmentally hazardous substance, liquid, n.o.s. (bis-[4-(2,3-epoxipropoxi)phenyl]propane)
14.3 Transport hazard class(es)	
ADR/RID/ADN	: 9
IMDG	: 9
ΙΑΤΑ	: 9
14.4 Packing group	
ADR/RID/ADN Packing group Classification Code Hazard Identification Numbe Labels Remarks	 III M6 90 9 ADR: These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.
IMDG Packing group Labels EmS Code	: III : 9 : F-A, S-F



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Remarks	: IMDG: Marine pollutants package packagings containing a net quan packaging of 5 l or less for liquids single or inner packaging of 5 kg of subject to any other provisions of pollutants provided the packaging provisions of 4.1.1.1, 4.1.1.2 and of marine pollutants also meeting another hazard class all provision any additional hazards continue to IMDG Code segregation group - r	ed in single or combination nitity per single or inner or having a net mass per or less for solids are not this Code relevant to marine as meet the general 4.1.1.4 to 4.1.1.8. In thecase the criteria for inclusion in as of this Code relevant to o apply.
ΙΑΤΑ		
Packing instruction (cargo	: 964	
aircraft) Packing instruction	: 964	
(passenger aircraft)		
Packing group	: 111	
Labels Remarks	 9 IATA: These substances when tracombination packagings containing quantity per single or inner packa or having a net mass of 5 kg or le solids, are not subject to any othe Regulations provided the packagi general provisions of 5.0.2.4.1, 5. 	ansported in single or ng a net ging of 5 L or less far liquids ss for er provisions of these ings meet the 0.2.6.1.1 and 5.0.2.8.
14.5 Environmental hazards		
ADR/RID/ADN Environmentally hazardous	: yes	
IMDG Marine pollutant	: yes	
IATA Environmentally hazardous	: yes	
14.6 Special precautions for user		
Remarks	: The transport of dangerous good unloading, must be done by peop necessary training required by Mo	ls, including their loading and le who received the odal Regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.



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for

SECTION 15: Regulatory information

RE the pre	EACH - Restrictions on the manufacture, placing on e market and use of certain dangerous substances, eparations and articles (Annex XVII)	:	Not applicable
RE Co	EACH - Candidate List of Substances of Very High oncern for Authorisation (Article 59).	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
RE (Ai	EACH - List of substances subject to authorisation nnex XIV)	:	Not applicable

-		Quantity 1	Quantity 2
E2	ENVIRONMENTAL	200 t	500 t
	HAZARDS		

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

Full text of H-Statements

H302	: Harmful if swallowed.
H312	: Harmful in contact with skin.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H332	: Harmful if inhaled.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H411	: Toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.
Full text of other abbre	eviations
Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
Further information	
Training advice	: Provide adequate information, instruction and training operators.



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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.



GlassCast 10 Epoxy Hardener

Version 7.0 SDB_GB

Revision Date 03.12.2020

Print Date 03.12.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier		
Trade name	: GlassCast 10 Epoxy Hardener	
1.2 Relevant identified uses of the substance or mixture and uses advised against		
Use of the Substance/Mixture	: Epoxy Hardener	
1.3 Details of the supplier of the safety data sheet		
Company	Easy Composites Ltd	
	Unit 39, Park Hall Business Village	
	Longton, Stoke on Trent	
	Staffordshire	
	ST3 5XA	
	United Kingdom	
Telephone	+44 (0) 1782 454499	
E-mail address	sales@easycomposites.co.uk	
1.4 Emergency telephone num	ber 44 (0) 1782 454499	
	(office hours only)	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)			
Acute toxicity, Category 4	H302: Harmful if swallowed.		
Skin corrosion, Category 1B	H314: Causes severe skin burns and eye damage.		
Serious eye damage, Category 1	H318: Causes serious eye damage.		
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.		
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.		

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)





GlassCast 10 Epoxy Hardener

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Signal word :	Danger		
Hazard statements :	H302 H314 H317 H411	Harmful if swallowed. Causes severe skin burn May cause an allergic sk Toxic to aquatic life with	is and eye damage. in reaction. long lasting effects.
Supplemental Hazard : Statements	EUH071	Corrosive to the respirate	ory tract.
Precautionary statements :	Prevention: P261	Avoid breathing dust/ fur	ne/ gas/ mist/
	P273 P280	Avoid release to the envi Wear protective gloves/ eye protection/ face protection/	ronment. protective clothing/ ection.
	Response: P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.		
): Take off lated clothing. nower.
	P304 + P340 + P3	310 IF INHALED: Remo air and keep comfortable Immediately call a POIS doctor.	ve person to fresh for breathing. ON CENTER/
	P305 + P351 + P3	338 + P310 IF IN EYES with water for several mi contact lenses, if presen Continue rinsing. Immed POISON CENTER/ docto	: Rinse cautiously nutes. Remove t and easy to do. iately call a or.

Hazardous components which must be listed on the label: 3-aminomethyl-3,5,5-trimethylcyclohexylamine

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature

: Cycloaliphatic amine based mixture

Hazardous components

Chemical name	CAS-No. EC-No./List Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
3-aminomethyl-3,5,5-	2855-13-2	Acute Tox.4; H302	>= 30 - < 50



GlassCast 10 Epoxy Hardener

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trimethylcyclohexylamine	220-666-8 01-2119514687-32	Acute Tox.4; H312 Skin Corr.1B; H314 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Chronic3; H412	
benzyl alcohol	100-51-6 202-859-9 01-2119492630-38	Acute Tox.4; H302 Acute Tox.4; H332 Eye Irrit.2; H319	>= 20 - < 25
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1 chloro-2,3-epoxypropane, reaction products with trimethylhexane-1,6- diamine	153195-44-9 - 01-2120781950-47- 0001	Skin Corr.1B; H314 Eye Dam.1; H318 Aquatic Chronic1; H400 Aquatic Acute1; H400	>= 12,5 - < 20
Poly[oxy(methyl-1,2-ethanediyl)], c (2-aminomethylethyl)-ω-(2- aminomethylethoxy)-	- 9046-10-0 01-2119557899-12	Skin Corr.1C; H314 Eye Dam.1; H318 Aquatic Chronic3; H412	>= 10 - < 12,5
2,2,4(or 2,4,4)-trimethylhexane-1,6 diamine	6- 25513-64-8 247-063-2 01-2119560598-25	Acute Tox.4; H302 Skin Corr.1A; H314 Eye Dam.1; H318 Skin Sens.1A; H317	>= 1 - < 3

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	 Show this safety data sheet to the doctor in attendance. Keep warm and in a quiet place. Take off all contaminated clothing immediately.
If inhaled	 Move to fresh air. Keep patient warm and at rest. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician. If breathing is irregular or stopped, administer artificial respiration.
In case of skin contact	 Wash off immediately with soap and plenty of water. Do NOT use solvents or thinners. If on clothes, remove clothes. Burns must be treated by a physician.
In case of eye contact	 Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist. If easy to do, remove contact lens, if worn.



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If swallowed	 Do NOT induce vomiting. If a person vomits when lying on his recovery position. Call a physician immediately. Give small amounts of water to drink 	back, place him in the د.
4.2 Most important symptoms and	l effects, both acute and delayed	
Symptoms	: Burn superficial burning sensation Redness Severe irritation	
4.3 Indication of any immediate m	edical attention and special treatmer	nt needed
Treatment	: The first aid procedure should be es with the doctor responsible for indus	tablished in consultation trial medicine.
SECTION 5: Firefighting measu	ures	
5.1 Extinguishing media		
Suitable extinguishing media	: Carbon dioxide (CO2) Foam Dry powder Water mist	
Unsuitable extinguishing media	: None known.	
5.2 Special hazards arising from t	he substance or mixture	
Specific hazards during firefighting	 The pressure in sealed containers can influence of heat. Cool closed containers exposed to find Hazardous decomposition products conditions. 	an increase under the ire with water spray. formed under fire
5.3 Advice for firefighters		
Special protective equipment for firefighters	: In the event of fire, wear self-contain Use personal protective equipment.	ed breathing apparatus.
Further information	: In the event of fire and/or explosion of Use extinguishing measures that are circumstances and the surrounding of Immediately evacuate personnel to so Prevent fire extinguishing water from water or the ground water system.	do not breathe fumes. appropriate to local environment. safe areas. contaminating surface



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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation. Inform the responsible authorities in case of gas le entry into waterways, soil or drains.	nd 8. akage, or of
--	-----------------------

6.2 Environmental precautions

Environmental precautions	 Do not allow uncontrolled discharge of product into the environment. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.
---------------------------	---

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	: Soak up with inert absorbent material (e.g. sand, silica gel,
	acid binder, universal binder, sawdust).
	Contain spillage, and then collect with non-combustible
	absorbent material, (e.g. sand, earth, diatomaceous earth,
	vermiculite) and place in container for disposal according to
	local / national regulations (see section 13).
	Pick up and transfer to properly labelled containers.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms. Do not breathe vapours or spray mist. Avoid inhalation, ingestion and contact with skin and eyes. Wear personal protective equipment. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Advice on protection against fire and explosion	:	Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures	:	Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.



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7.2 Conditions for safe storage, including any incompatibilities

Require areas a	ements for storage : and containers	K V n	Keep containers tightly closed in a dry, cool and well- rentilated place. Keep in properly labelled containers. To naintain product quality, do not store in heat or direct sunlight.
Further storage	information on : conditions	F	Protect from moisture.
Advice	on common storage :	: K C K	Keep away from isocyanates. Do not store near acids. Keep away from oxidizing agents.
Other d	lata :	S	Stable at normal ambient temperature and pressure.
7.3 Specific	end use(s)		
Specific	c use(s) :	C s	Consult the technical guidelines for the use of this ubstance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

benzyl alcohol	: End Use: Workers
	Exposure routes: Inhalation
	Potential health effects: Short-term exposure. Systemic effects
	Value: 450 mg/m3
	End Use: Workers
	Exposure routes: Inhalation
	Potential health effects: Long-term exposure. Systemic effects
	Value: 90 mg/m3
	End Use: Workers
	Exposure routes: Skin contact
	Potential health effects: Short-term exposure, Systemic effects
	Value: 47 mg/kg
	End Use: Workers
	Exposure routes: Skin contact
	Potential health effects: Long-term exposure, Systemic effects
	Value: 9,5 mg/kg
	End Use: Consumers
	Exposure routes: Ingestion
	Potential health effects: Short-term exposure, Systemic effects
	Value: 25 mg/kg
	End Use: Consumers
	Exposure routes: Ingestion
	Potential health effects: Long-term exposure, Systemic effects
	Value: 5 mg/kg
	End Use: Consumers
	Exposure routes: Inhalation
	Potential health effects: Short-term exposure, Systemic effects



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Poly[oxy(methyl-1,2- ethanediyl)], .alpha(2- aminomethylethyl)omega(2- aminomethylethoxy)-	Value: 40,55 mg/m3 End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-terr Value: 8,11 mg/m3 End Use: Consumers Exposure routes: Skin contact Potential health effects: Short-terr Value: 28,5 mg/kg End Use: Consumers Exposure routes: Skin contact Potential health effects: Long-terr Value: 5,7 mg/kg : End Use: Workers Exposure routes: Skin contact Potential health effects: Long-terr Value: 2,5 mg/kg End Use: Workers Exposure routes: Skin contact Potential health effects: Long-terr Value: 2,5 mg/kg End Use: Workers Exposure routes: Skin contact Potential health effects: Long-terr Value: 0,623 mg/cm2 End Use: Consumers Exposure routes: Skin contact Potential health effects: Long-terr Value: 1,25 mg/kg End Use: Consumers Exposure routes: Skin contact Potential health effects: Long-terr Value: 1,25 mg/kg End Use: Consumers Exposure routes: Skin contact Potential health effects: Long-terr Value: 0,311 mg/cm2 End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-terr	n exposure, Systemic effects m exposure, Systemic effects n exposure, Systemic effects n systemic effects n local effects m local effects m local effects
Producted No Effect Concentrat	value: 0,04 mg/kg	on (EC) No. 1907/2006:
3-aminomethyl-3.5.5-	: Fresh water	ON (EC) NO. 1907/2006.
trimethylcyclohexylamine	Value: 0,06 mg/l Marine water Value: 0,006 mg/l Intermittent releases Value: 0,23 mg/l Fresh water sediment Value: 5,784 mg/kg Marine sediment Value: 0,578 mg/kg Sewage treatment plant Value: 3,18 mg/l Soil	
benzyl alcohol	Value: 1,121 mg/kg : Fresh water Value: 1 mg/l Marine water Value: 0,1 mg/l Fresh water sediment	



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Poly[oxy(methyl-1,2- ethanediyl)], .alpha(2- aminomethylethyl)omega(2- aminomethylethoxy)-	Value: 5,27 mg/kg Marine sediment Value: 0,527 mg/kg Soil Value: 0,456 mg/kg Sewage treatment plant Value: 39 mg/l Intermittent releases Value: 2,3 mg/l : Fresh water Value: 0,015 mg/l Marine water Value: 0,015 mg/l Fresh water sediment Value: 0,132 mg/kg Marine sediment Value: 0,125 mg/kg Soil Value: 0,0176 mg/kg Intermittent releases Value: 0,15 mg/l Sewage treatment plant Value: 7,5 mg/l	
8.2 Exposure controls		
Engineering measures Effective exhaust ventilation syste	em	
effective ventilation in all process	ing areas	
Personal protective equipment	Sofoty globood with side shields on	nforming to EN166
Eye protection .	Do not wear contact lenses. Ensure that eyewash stations and s the workstation location.	safety showers are close to
Hand protection	Protective gloves complying with Fl	N 374
Remarks :	Nitrile rubber	
Skin and body protection :	Protective suit Recommended preventive skin pro-	tection
Respiratory protection :	Use respirator when performing op- exposure to vapour of the product. The filter class for the respirator mu- maximum expected contaminant co- (gas/vapour/aerosol/particulates) the handling the product. If this concen- contained breathing apparatus must Recommended Filter type: ABEK-filter Equipment should conform to EN 1.	erations involving potential ist be suitable for the incentration tat may arise when tration is exceeded, self- t be used.

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Protective measures	: Avoid contact with skin. Wear suitable protective equipment.	

SECTION 9: Physical and chemical properties

9.1 lr	nformation on basic physical a Appearance	ano :	d chemical properties liquid
	Colour	:	light yellow
	Odour	:	ammoniacal
	Odour Threshold	:	not determined
	рН	:	11, 1 %
	Melting point/freezing point	:	Not applicable
	Boiling point/boiling range	:	> 200 °C
	Flash point	:	150 °C
	Evaporation rate	:	not determined
	Upper explosion limit	:	Not applicable
	Lower explosion limit	:	Not applicable
,	Vapour pressure	:	Not applicable
	Relative vapour density	:	not determined
	Density	:	1 g/cm3 (25 °C)
	Bulk density	:	not determined
	Solubility(ies) Solubility in other solvents	:	not determined
	Partition coefficient: n- octanol/water	:	No data available
	Ignition temperature	:	Not applicable
	Auto-ignition temperature	:	Not applicable
	Thermal decomposition	:	Method: No data available



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Viscosity Viscosity, dynamic	: 150 - 250 mPa.s (25 °C)	
Viscosity, kinematic	: not determined	
Explosive properties	: Not applicable	
Oxidizing properties	: Not applicable	
9.2 Other information		
Surface tension	: not determined	
Sublimation point	: Not applicable	

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	: Reacts with the following substances: Acids Strong oxidizing agents
10.4 Conditions to avoid	
Conditions to avoid	: No decomposition if used as directed.
10.5 Incompatible materials	
Materials to avoid	: Strong acids Strong oxidizing agents
10.6 Hazardous decomposition	n products
Hazardous decomposition products	: This product may release the following: Nitrogen oxides (NOx) Carbon monoxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Carbon dioxide (CO2)



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Acute oral toxicity	:	Acute toxicity estimate : 715,82 mg/kg Method: Calculation method	
Acute inhalation toxicity	:	Remarks: No data available	
Acute dermal toxicity	:	Acute toxicity estimate : > 2.000 mg/kg Method: Calculation method	
Acute toxicity (other routes of administration)	:	Remarks: No data available	
Components: benzyl alcohol: Acute inhalation toxicity	:	LC50 (Rat, male and female): > 4.178 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: yes	
Poly[oxy(methyl-1,2-ethaned Acute oral toxicity	liy :	I)], α-(2-aminomethylethyl)-ω-(2-aminomet LD50 (Rat, male and female): 2.885,3 mg/k Method: OECD Test Guideline 401 GLP: yes	: hylethoxy)-: [:] g
Acute dermal toxicity	:	LD50 (Rabbit, male and female): 2.979,7 m Method: OECD Test Guideline 402 GLP: yes	ıg/kg
Skin corrosion/irritation			
<u>Product:</u> Remarks: No data available			
<u>Components:</u> benzyl alcohol: Species: Rabbit Method: OECD Test Guideline Result: No skin irritation GLP: yes	- 40	04	
4,4'-Isopropylidenediphenol, reaction products with trime Species: human skin Assessment: Causes burns. Method: OECD Test Guideline Result: Corrosive to skin GLP: yes	, ol th 4	ligomeric reaction products with 1-chloro- ylhexane-1,6: 31	·2,3-epoxypropane,
Poly[oxy(methyl-1,2-ethaned Species: Rabbit Method: OECD Test Guideline Result: Corrosive	liy 4(l)], α-(2-aminomethylethyl)-ω-(2-aminomet	:hylethoxy)-:



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Serious eye damage/eye irritation

Product:

Remarks: No data available

Components:

benzyl alcohol: Species: Rabbit Method: OECD Test Guideline 405 **Result: Eye irritation** GLP: yes

Poly[oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)-:

Method: OECD Test Guideline 405 Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product: Remarks: No data available

Germ cell mutagenicity

Carcinogenicity

Product: Remarks: No data available

Reproductive toxicity

Product: Effects on fertility : Remarks: No data available Remarks: No data available Effects on foetal : Remarks: No data available Remarks: No data available development STOT - single exposure STOT - repeated exposure **Repeated dose toxicity** Product: Remarks: No data available

Aspiration toxicity

Components:



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3-aminomethyl-3,5,5-trimethylcyclohexylamine: No aspiration toxicity classification

Further information

Product:

Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:		
Toxicity to fish	:	Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: No data available
Components:		
3-aminomethyl-3,5,5-trimethy	/Ic	yclohexylamine:
Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 110 mg/l Exposure time: 96 h Test Type: semi-static test Method: Directive 67/548/EEC, Annex V, C.1. GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 23 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae	:	ErC50 (Scenedesmus capricornutum (fresh water algae)): > 50 mg/l Exposure time: 72 h Test Type: static test Method: Directive 67/548/EEC, Annex V, C.3. GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 3 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test GLP: yes
benzyl alcohol:		
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 230 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 GLP: yes



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Toxicity to algae	: ErC50 (Pseudokirchneriella subcap mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes	pitata (green algae)): 770
4,4'-Isopropylidenediphenol, reaction products with trimet	oligomeric reaction products with 1 hvlhexane-1.6:	-chloro-2,3-epoxypropane,
Toxicity to daphnia and other aquatic invertebrates	: EL50 (Daphnia magna (Water flea) Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes): 0,64 mg/l
Toxicity to algae	 EL50 (Pseudokirchneriella subcapit mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 GLP: yes 	tata (green algae)): 0,96
M-Factor (Short-term (acute) aquatic hazard)	: 1	
Poly[oxy(methyl-1,2-ethaned	iyl)], α-(2-aminomethylethyl)-ω-(2-an	ninomethylethoxy)-:
Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainb Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203 GLP: yes	ow trout)): > 15 mg/l
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea) Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes)): 80 mg/l
Toxicity to algae	 NOEC (Pseudokirchneriella subcar mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes 	oitata (green algae)): 0,32
12.2 Persistence and degradabilit	у	
Product:		

Biodegradability	: Remarks: No data available
Physico-chemical removability	: Remarks: No data available



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<u>C</u>	omponents:	
3-	aminomethyl-3,5,5-trimethylcy	yclohexylamine:
Bi	odegradability :	Test Type: aerobic Result: Not readily biodegradable. Method: Directive 67/548/EEC Annex V, C.4.A. GLP: yes
4, [,] re	4'-lsopropylidenediphenol, oli action products with trimethy	gomeric reaction products with 1-chloro-2,3-epoxypropane, Ihexane-1,6:
Bi	odegradability :	Result: Readily biodegradable. Method: OECD Test Guideline 301F GLP: yes
Рс	oly[oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)-:
Bi	odegradability :	Test Type: aerobic Result: Not readily biodegradable. Method: OECD Test Guideline 301B GLP: yes
12.3 Bi	ioaccumulative potential	
Pr	roduct:	
Bi	oaccumulation :	Remarks: No data available
<u>Со</u> 3- Ра ос	omponents: aminomethyl-3,5,5-trimethylcy artition coefficient: n- : ctanol/water	yclohexylamine: log Pow: 0,99 Method: OECD Test Guideline 107 GLP: yes
Po	olv[oxv(methvl-1.2-ethanedivl)	l. α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)-:
Pa oc	artition coefficient: n- : tanol/water	log Pow: 1,34 (25 °C) Method: OECD Test Guideline 117 GLP: yes
12.4 M	obility in soil	
No	o data available	
12.5 R	esults of PBT and vPvB asses	sment
Pr	roduct:	
As	ssessment :	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher
12.6 O	ther adverse effects	
<u>Pr</u>	<u>oduct:</u>	



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Additional ecological information	: Remarks: An environmental hazard of event of unprofessional handling or c	cannot be excluded in the lisposal.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Product	 In accordance with local and national regulations. Container hazardous when empty. Do not dispose of with domestic refuse. Do not mix waste streams during collection.
Contaminated packaging	: Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number		
ADR/RID/ADN	:	UN 2735
IMDG	:	UN 2735
ΙΑΤΑ	:	UN 2735
14.2 UN proper shipping name		
ADR/RID/ADN	:	AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorone diamine)
IMDG	:	AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONEDIAMINE)
ΙΑΤΑ	:	Amines, liquid, corrosive, n.o.s. (Isophorone diamine)
14.3 Transport hazard class(es)		
ADR/RID/ADN	:	8
IMDG	:	8
ΙΑΤΑ	:	8
14.4 Packing group		
ADR/RID/ADN Packing group Classification Code Hazard Identification Number Labels Tunnel restriction code Remarks		III C7 80 8 E
IMDG Packing group	:	III



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Lal Err Re	bels ìS Code marks	: :	8 F-A, S-B IMDG Code segregation group 18 - Alkalis	
IA Pa aire	FA cking instruction (cargo craft)	:	856	
Pa (pa	cking instruction assenger aircraft)	:	852	
Pa Lal	cking group bels	:	III 8	
14.5 En	vironmental hazards			
AD En	R/RID/ADN vironmentally hazardous	:	yes	
IM Ma	DG rrine pollutant	:	yes	
IA En	FA vironmentally hazardous	:	yes	
14.6 Sp	ecial precautions for user			
Re	marks	:	The transport of dangerous goods, including unloading, must be done by people who rec necessary training required by Modal Regula	y their loading and eived the ations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislat	ion specific for the substance or mixture
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	: Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	: This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
REACH - List of substances subject to authorisation (Annex XIV)	: Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	: Not applicable



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Seveso III: Directive 2012/18/EU o major-accident hazards involving	of the European Parliament and dangerous substances.	of the Counci	I on the control of
	-	Quantity 1	Quantity 2
E2	ENVIRONMENTAL HAZARDS	200 t	500 t
Other regulations :	For the product composition, we substances listed in the Europe (RoHS 2, RoHS 3, and China R The product is thus in line with We do not add Conflict minerals	e do not add a an Directive 2 toHS). those directive s to the produ	any of the 2011/65/EU es. ict.

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

Items where relevant changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H302 H312 H314 H217	:	Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage.
H317 H318 H319 H332	:	Causes serious eye damage. Causes serious eye irritation. Harmful if inhaled.
H400 H412 Full tout of other obbravia	:	Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

text of other abbreviation

Acute Tox. :	Acute toxicity
Aquatic Acute :	Short-term (acute) aquatic hazard
Aquatic Chronic :	Long-term (chronic) aquatic hazard
Eye Dam. :	Serious eye damage
Eye Irrit. :	Eye irritation
Skin Corr. :	Skin corrosion
Skin Sens. :	Skin sensitisation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx -Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP -Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International



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Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO -International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China: IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan): ISO - International Organisation for Standardization: KECI - Korea Existing Chemicals Inventory: LC50 - Lethal Concentration to 50 % of a test population: LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC -No Observed (Adverse) Effect Concentration: NO(A)EL - No Observed (Adverse) Effect Level: NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD -Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID -Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Verv Bioaccumulative

Further information

Training advice

: Provide adequate information, instruction and training for operators.

Classification of the m	nixture:	Classification procedure:	
Acute Tox. 4	H302	Calculation method	
Skin Corr. 1B	H314	Calculation method	
Eye Dam. 1	H318	Calculation method	
Skin Sens. 1	H317	Calculation method	
Aquatic Chronic 2	H411	Calculation method	

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.

GB / EN
SAFETY DATA SHEET (SDS)



Jacquard Products Manufactured by Rupert, Gibbon & Spider, Inc. P.O. Box 425 | Healdsburg, CA 95448 800.442.0455 | Fax: 707.433.4906 www.jacquardproducts.com

Revision Date: 04/23/2018

SECTION I - CHEMICAL, PRODUCT & COMPANY INFORMATION

Product Name:	PIÑATA ALCOHOL INK & CLARO EXTENDER		
Product Number/Code:	002-031 (STANDARD COLORS), JFC1001, JFC2001		
Recommended Use:	Ink & ink medium for hard surfaces		
Restrictions on use:	None known		
Manufacturer:	Rupert, Gibbon & Spider, Inc I 147 Healdsburg Ave. Healdsburg, CA 95448 I-800-442-0455 / 707-433	-9577	
Emergency Number:	gency Number: ChemTel, Inc Contract #MIS9128344		
	North America: I-800-255-3924	International: I-8I3-248-0585	

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS classification in accordance with	29 CFR 1910 (OSHA HCS)	
Toxicological Data on Ingredients:		
Hazard Classification		
Physical Hazards:	Flammable liquids	Category 2
Health Hazards:	Acute toxicity, oral	Category 4
	Skin Irritant	Category 2
	Eye Irritant	Category 2A
Environmental Hazards:	Not classified	
Label Elements		
Pictogram:		
Signal Words:	DANGER, WARNING	
Hazard Statements-EU:	H225 Highly flammable liquid and vapoH302 Harmful if swallowed.H315 Causes skin irritation.H319 Causes serious eye irritation.	r.

Precautionary Statements-EU:	
Prevention:	 P210 Keep away from heat/sparks/open flames/hot surfaces No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P260 Do not breathe mist/vapors/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing/eye protection.
Response:	 P301+P312 If swallowed: Call a poison center/doctor if you feel unwell. P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting. P302+P352 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a poison center/doctor. P321 Specific treatment (see product label). P332+P313 IF SKIN irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
Storage:	P403+P235 Store in a well-ventilated place. Keep cool.
Disposal:	P501 Dispose of contents/container in accordance with local/regional/ national/international regulations.
Hazard(s) not otherwise classified:	There are no other hazards not otherwise classified that have been identified.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Chemical identity	Content in percent (%)*	CAS #
Ethanol	50-70%	64-17-5
2-(propyloxy)ethanol	10-20%	2807-30-9
propan-1-ol	<10%	71-23-8
isopropyl acetate	<10%	108-21-4
Basic yellow 37	≤ 5%	6358-36-7
Nitrocellulose, colloided, granular	≤ 5%	9004-70-0
Basic Blue 7	≤ 5%	2390-60-5
Propan-2-ol	≤ 5%	67-63-0
For the listed ingredient(s) the identity and/or exact t	percentage(s) are being withheld as a trade secret	

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret. For the wording of the listed Hazard Statements, refer to section 16.

SECTION 4 - FIRST AID MEASURES

Description of first aid measures:		
In the event of skin contact:	Immediately remove any clothing soiled by the product. Immediately wash with water and soap and rinse thoroughly. If skin irritation or rash occurs: Get medical advice/attention.	
In the event of eye contact:	Remove contact lenses if worn. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.	
In the event of swallowing:	Rinse out mouth and then drink plenty of water. Do not induce vomiting; immediately call for medical help.	
In the event of exposure by inhalation:	Supply fresh air; consult doctor in case of complaints. Provide oxygen treatment if affected person has difficulty breathing.	
Most important symptoms and effects, acute and delayed:	Irritating to eyes and skin. Coughing, dizziness, if inhaled. Breathing diffi- culty. May cause gastrointestinal irritation if ingested. Nausea in case of ingestion. DANGER: Harmful if swallowed.	
Indication of any immediate medical attention and special treatment needed:	Treat symptomatically.	

SECTION 5 - FIREFIGHTING MEASURES

Suitable extinguishing media:	CO2, extinguishing powder or water spray. Fight larger fire with alcohol resistant foam.
Unsuitable extinguishing media:	Water stream
Special hazards arising from the substance or mixture:	Formation of toxic gases is possible during heating or in case of fire.
Advice for fire fighters:	Protective equipment: Wear self-contained respiratory protective device. Wear fully protective suit. Additional information: Eliminate all ignition sources if safe to do so. Cool endangered receptacles with water spray.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Ensure adequate ventilation. Use personal protective equipment as re- quired. Keep away from ignition sources. Protect from heat
Methods and material for containment and clean up:	Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders). Dispose of the collected material according to regulations.
Environmental procedures:	Avoid release to the environment. Inform respective authorities in case of seepage into water course or sewage system.
Reference to other sections:	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling:	Use only in well ventilated areas. Avoid splashes or spray in enclosed areas. Keep out of reach of children.
Information about protection against explosions and fires:	Highly flammable liquid and vapor. Keep ignition sources away - Do not smoke. Protect against electrostatic charges.
Conditions for safe storage including any incompatibilities:	 Requirements to be met by storerooms and receptacles: Avoid storage near extreme heat, ignition sources or open flame. Store in cool, dry conditions in well sealed receptacles. Information about storage in one common storage facility: Store away from foodstuffs. Store away from oxidizing agents. Further information about storage conditions: Store locked up.
Specific end use(s):	No relevant information available.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:			
Components with limit values that require monitoring at the workplace:	64-17-5 Ethanol:	PEL (USA):	Long-term value: 1,900 mg/m³, 1,000 ppm
		REL (USA):	Long-term value: 1,900 mg/m³, 1,000 ppm
		EV (Canada):	Long-term value: 1,900 mg/m³, 1,000 ppm
		LMPE (Mexico):	Long-term value: 1000 ppm A3
	2807-30-9 2 (propyloxy) ethanol:	EV (Canada):	Long-term value: 110 mg/m³, 25 ppm Skin
	71-23-8 propan-1-ol:	PEL (USA):	Long-term value: 500 mg/m³, 200 ppm
		REL (USA):	Short-term value: 625 mg/m³, 250 ppm Long-term value: 500 mg/m³, 200 ppm Skin
		TLV (USA):	Long-term value: 246 mg/m³, 100 ppm
		EL (Canada):	Long-term value: 100 ppm
		EV (Canada):	Long-term value: 100 ppm
		LMPE (Mexico):	Long-term value: 100 ppm A4
	108-21-4	PEL (USA):	Long-term value: 950 mg/m³, 250 ppm
	isopropyl acetate:	TLV (USA):	Short-term value: NIC-626 mg/m³, NIC-150 ppm Long-term value: NIC-417 mg/m³, NIC-100 ppm
		EL (Canada):	Short-term value: 200 ppm Long-term value: 100 ppm
		EV (Canada):	Short-term value: 200 ppm Long-term value: 100 ppm
		LMPE (Mexico):	Short-term value: 200 ppm Long-term value: 100 ppm
	67-63-0	PEL (USA):	Long-term value: 980 mg/m³, 400 ppm
	Propan-2-ol:	REL (USA):	Short-term value: 1225 mg/m³, 500 ppm Long-term value: 980 mg/m³, 400 ppm
		TLV (USA):	Short-term value: 984 mg/m³, 400 ppm Long-term value: 492 mg/m³, 200 ppm BEI
		EL (Canada):	Short-term value: 400 ppm Long-term value: 200 ppm
		EV (Canada):	Short-term value: 400 ppm Long-term value: 200 ppm
		LMPE (Mexico):	Short-term value: 400 ppm Long-term value: 200 ppm A4, IBE
Ingredients with biological limit values:	67-63-0 Propan-2-ol:	BEI (USA):	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter:Acetone (background, nonspecific)

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Individual protection measures, such as personal protective equipment:		
General protective and hygienic measures:	The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Do not eat, drink or smoke while using the product. Immediately remove all soiled and contaminated clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with the eyes and skin.	
Eye/face protection:	Safety glasses Follow relevant national guidelines concerning the use of protective eye wear.	
Skin protection:	Protective work clothing	
Hand protection:	Protective gloves The glove material has to be impermeable and resistant to the product/the substance/ the preparation.	
Limitation and supervision of exposure into the environment:	No relevant information available.	
Risk management measures:	No relevant information available.	

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

General information:		
Appearance and physical state:	Liquid	
Color:	According to product specification.	
Type of Odor:	Not determined	
Odor threshold:	Not determined	
Important health, safety and environmental information:		
Initial Boiling Point and Boiling Range:	>35°C (>95°F)	
Melting Point/Freezing Point:	Not determined	
Flammability Classification:	Not applicable	
Flash Point:	14°C (57.2°F)	
Auto-ignition Temperature:	Not determined	
Decomposition Temperature:	Not determined	
Flammability Limits (lower/upper):	Not determined	
Evaporation rate:	Not determined	
Vapor Pressure:	Not determined	
Vapor Density (Air=1):	Not determined	
Octanol/Water Partition Coefficient (log Pow):	Not determined	
Specific Gravity:	Not determined	
Bulk Density:	Not determined	
Water Solubility:	Not miscible or difficult to mix.	
pH:	Not determined	
Viscosity (dynamic, kinematic):	Not determined	
Explosive Properties:	Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.	
Oxidizing Properties:	Non-oxidizing	
Molecular Formula:	Not determined	
Molecular Weight:	Not determined	
Relative Density:	Not determined	

SECTION 10 - STABILITY AND REACTIVITY

Reactivity:	No relevant information available.
Stability:	Stable under normal temperatures and pressures.
Possibility of hazardous reactions:	 Highly flammable liquid and vapor. Reacts violently with oxidizing agents. Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized. Toxic fumes may be released if heated above the decomposition point. Used empty containers may contain product gases which form explosive mixtures with air.
Conditions to avoid:	Excessive heat
Incompatible materials:	Oxidizers, strong bases, strong acids
Hazardous decomposition products (under fire conditions only):	Carbon monoxide, carbon dioxide, oxides of nitrogen and sulfur Chlorine compounds

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects: Acute toxicity: Harmful if swallowed LD/LC50 values that are relevant for classification:			
64-17-5 Ethanol:	Oral: LD50 7,060 mg/kg (rat)		
	Inhalative: LC50/4h 20,000 mg/l (rat)		
2807-30-9 2-(propyloxy)ethanol:	Oral: LD50 2,260 mg/kg (mouse); 3,100 mg/kg (rat)		
	Dermal: LD50 1,300 mg/kg (rabbit)		
2390-60-5 Basic Blue 7:	Oral: LD50 100 mg/kg (rat)		
	Dermal: LD50 >2,500 mg/kg (rabbit)		
6358-36-7 Basic yellow 37:	Oral: LD50 >50-300 mg/kg (rat)		
Primary irritant effects:			
Skin Contact:	Irritant to skin and mucous membranes.		
Eye Contact:	Causes eye irritation.		
Sensitization:	Based on available data, the classification criteria are not met.		
Carcinogenic categories:			
IARC (International Agency for Research on Cancer):	64-17-5 Ethanol I	1	
	13463-67-7 titanium dioxide	2B	
NTP (National Toxicology Program):	None of the ingredients are listed.		
OSHA-Ca (Occupational Safety & Health Administration):	None of the ingredients are listed.		
Possible routes of exposure:	Ingestion, inhalation, eye contact, skin contact.		
Germ cell mutagenicity:	Based on available data, the classification criteria are not met.		
Carcinogenicity:	Based on available data, the classification criteria are not met.		
Reproductive toxicity:	Based on available data, the classification criteria are not met.		
STOT-single exposure:	Based on available data, the classification criteria are not met.		
STOT-repeated exposure:	Based on available data, the classification criteria are not met.		
Aspiration hazard:	Based on available data, the classification criteria are not met.		

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity:		
Aquatic toxicity:	Toxic to aquatic life with long lasting effects: 2390-60-5 Basic Blue 7 LC50 <1mg/l (daphnia)	
Persistence and degradability:	No relevant information available.	
Bioaccumulative potential:	No relevant information available.	
Mobility in soil:	No relevant information available.	
Other adverse effects:	No relevant information available.	
Additional information:	Avoid release to the environment. Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment cannot be excluded.	

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods:	
Disposal:	The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and non-hazardous wastes.
Container Disposal:	Disposal must be made according to official regulations.

SECTION 14 - TRANSPORT INFORMATION

PACKING GROUP (DOT, ADR, IMDG, IATA):	2	
DOT:		
DOT Proper Shipping Description:	Printing Ink	
Hazard Class:	3	
Placard:	Flammable Liquids	
Marine Pollutant:	Yes - Product contains environmentally hazardous substances: Basic yellow 37, Basic Blue 7	
Transport/additional information:	Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each. Labeling as a Marine Pollutant is only required for bulk single package shipments. Bulk packaging consists of a maximum capacity of greater than 450 L (119 gallons) for a liquid and a maximum net mass greater than 400 kg (882 pounds) for a solid. (See 171.4(c)).	
IMDG:		
UN number:	UNI210	
UN proper shipping name:	Printing Ink	
Hazard Class:	3	
Placard:	Flammable Liquids	
EMS No.:	F-E, S-D	
Marine Pollutant:	Yes - Product contains environmentally hazardous substances: Basic yellow 37, Basic Blue 7	
Transport/additional information:	Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each. Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to provisions relevant to marine pollutants (See 2 10.2.7)	
IATA:	······································	
UN No:	UN1210	
Hazard Class:	3	
Packing group (DOT):	2	
Placard:	Flammable Liquids	
EMS No.:	F-E, S-D	
Transport/additional information:	Limited Quantity for packages less than 30 kg gross and inner packagings less than 0.5 L each /1 L net.	
ADR:		
Hazard Class:	3 (FI) Flammable liquids	
Label:	3	
Transport/additional information:	Limited Quantity for packages less than 30kg gross and inner packagings less than 5 L each. Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to provisions relevant to marine pollutants (See 5.2.1.81.).	
Special precautions for user:		
Warning: Flammable Liquids		
Danger code (Kemler):	33	
EMS number:	F-E,-S-D	
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable	

SECTION 15 - REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:		
Hazard categories		
Section 302 (extremely hazardous substances):	None of the ingredients are listed.	
Section 355 (extremely hazardous substances):	None of the ingredients are listed.	
Section 313 (specific toxic chemical listings):	67-63-0 Propan-2-ol	
TSCA (Toxic Substances Control Act):	All ingredients are listed.	
Proposition 65 (California):	Used as directed, this product will NOT expose you to chemicals known to cause cancer.	
	Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product. Reference to titanium dioxide is based on unbound respirable particles and is not generally applicable to product as supplied. 64-17-5 Ethanol 13463-67-7 titanium dioxide	
Chemicals known to cause developmental toxicity for females:	None of the ingredients are listed.	
Chemicals known to cause developmental toxicity for males:	None of the ingredients are listed.	
Chemicals known to cause developmental toxicity:	Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product. 64-17-5 Ethanol	
EPA (Environmental Protection Agency):	None of the ingredients are listed.	
IARC (International Agency for Research on Cancer):	64-17-5 Ethanol 13463-67-7 titanium dioxide	
NIOSH-Ca (National Institute for Occupational Safety and Health):	Present in trace quantities: 13463-67-7 titanium dioxide	

SECTION 16 - OTHER INFORMATION

HMIS Hazard ID:		
Health:	No information available	
Flammability: No information available		
Reactivity:	No information available	
Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect		

Disclaimer:

The information contained in this SDS is based on data from sources considered to be reliable but Rupert, Gibbon & Spider, Inc. does not guarantee the accuracy or completeness thereof. Rupert, Gibbon & Spider, Inc. urges each customer or recipient of this SDS to study it carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire and understand the data in this SDS.

Revision Date: 04/23/2018

National Chemical Inventories:		
All components of this product are listed on the following chemical substance inventories: TSCA (USA)		
DSL	(Canada)	
EINECS	(Europe)	
ENCS	(Japan) ECL	
	(Korea)	
AICS	(Australia) NZIoC	
	(New Zealand)	
PICCS	(Philippines)	
IECSC	(China)	

Abbreviations:	
ACGIH	American Conference of Governmental Industrial Hygienists
ADR	International carriage of Dangerous goods by Road
AICS	Australian Inventory of Chemical Substances
ATE	Acute Toxicity Estimate
BfR	Bundesinstitut für Risikobewertung recommendations for food contact materials
BCF	Bioconcentration Factor
BOD5	5-day Biochemical Oxygen Demand
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CLP	Classification, Labeling and Packaging regulation
COD	Chemical Oxygen Demand DOT Department of Transportation DSL Domestic Substances List
EINECS	European Inventory of Existing Chemical Substances
ECL	Existing Chemicals List (Korea)
ENCS	Existing and New Chemical Substances Inventory (Japan)
EN 689	Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy.
ERG	Emergency Response Guide
GHS	Globally Harmonized System
HMIS	Hazardous Materials Information System IARC International Agency for Research on Cancer IATA International Air Transport Association
ICAO	International Civil Aviation Organization IDLH Immediately Dangerous to Life and Health IMDG International Maritime Dangerous Goods
LD50	Lethal Dose to 50% of test animal population
МАК	Maximale Arbeitsplatz Konzentration
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety & Health Administration
РВТ	Persistent, Bioaccumulative and Toxic vPvB Very Persistent and Very Bioaccumulative PEL Permissible exposure limit
PICCS	Philippine Inventory of Commercial Chemical Substances
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorization of Chemical Substances
RID	International carriage of dangerous goods by Rail SARA Superfund Amendments and Reauthorization Act STEL Short Term Exposure Limit
SVHC	Substance of Very High Concern
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
VOC	Volatile Organic Compound
WGK	Wassergefahrdungsklasse (Water Hazard Class) WHMIS Workplace Hazardous Material Identification System

SAFETY DATA SHEET (SDS)



Jacquard Products Manufactured by Rupert, Gibbon & Spider, Inc. P.O. Box 425 | Healdsburg, CA 95448 800.442.0455 | Fax: 707.433.4906 www.jacquardproducts.com

Revision Date: 09/26/2019

SECTION I - CHEMICAL, PRODUCT & COMPANY INFORMATION

Product Name:	PIÑATA ALCOHOL INK (METALLIC COLORS) & CLEAN UP SOLUTION		
Product Number/Code:	032-036, JFC1000, JFC2000		
Recommended Use:	Inks to color any hard surface; for clean up of alcohol inks.		
Restrictions on use:	None known		
Manufacturer:	Rupert, Gibbon & Spider, Inc. I 147 Healdsburg Ave. Healdsburg, CA 95448 I-800-442-0455 / 707-433-9577		
Emergency Number:	ChemTel, Inc Contract	ChemTel, Inc Contract #MIS9128344	
	North America: I-800-255-3924	International: I-8I3-248-0585	

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS classification in accordance with 29 CFR 1910 (OSHA HCS) Toxicological Data on Ingredients:		
Physical Hazards:	Flammable liquids	Category 2
Health Hazards:	Serious eye damage/eye irritation	Category 2B
Environmental Hazards:	Hazardous to the aquatic environment, chronic hazard	Category 2
Label Elements		
Pictogram:		
Signal Words:	Danger, Warning	
Hazard Statements-EU:	H225 Highly flammable liquid and vapor. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects.	

Precautionary Statements-EU:		
Prevention:	 P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P264 Wash hands thoroughly after handling. P273 Avoid release into the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P281 Use personal protective equipment as required. P391 Collect spillage. Hazardous to the aquatic environment. 	
Response:	 P303+P361+P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse SKIN with water/shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/attention. P337+P313 IF eye irritation persists: Get medical advice/attention. P370+P378 In case of fire: Use carbon dioxide or dry powder, alcohol resistant foam, water in large amounts. 	
Storage:	P403+P235 Store in a well-ventilated place. Keep cool. P404 Store in a closed container. P405 Store locked up.	
Disposal:	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.	
Hazard(s) not otherwise classified:	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion. May cause skin and eye irritation.	

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CLEAN UP SOLUTION		
Chemical identity	Content in percent (%)*	CAS #
Ethanol	>=85 - <=95%	64-17-5
Propyl acetate	>=0 - <=5%	109-60-4
Isopropyl Alcohol	>=0 - <=5%	67-63-0
METALLIC COLORS		
Chemical identity	Content in percent (%)*	CAS #
Ethanol	50 - 65%	64-17-5
Propyl acetate	0 - 3.25%	109-60-4
Isopropyl Alcohol	0 - 3.25%	67-63-0
Colored pigments (Rich Gold, Silver, Copper, Brass & Pearl)	5 - 15%	Proprietary

*All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Composition comments:The components are not hazardous or are below required disclosure limits.

SECTION 4 - FIRST AID MEASURES

Description of first aid measures:		
In the event of skin contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.	
In the event of eye contact:	If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.	
In the event of swallowing:	Rinse mouth. Do NOT induce vomiting. Never give liquid to an uncon- scious person. Get medical attention immediately.	
In the event of exposure by inhalation:	Move to fresh air. If breathing is difficult, give oxygen. Perform artificial respiration if breathing has stopped.	
Most important symptoms and effects, acute and delayed:	No data available	
Indication of any immediate medical attention and special treatment needed:	No data available	

SECTION 5 - FIREFIGHTING MEASURES

General fire hazards:	No data available
Suitable extinguishing media:	Use carbon dioxide or dry powder, alcohol resistant foam, water in large amounts.
Unsuitable extinguishing media:	No data available
Special hazards arising from the substance or mixture:	No data available
Special fire fighting procedures:	No data available
Special protective equipment for firefighters:	No data available

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	No data available
Methods and material for containment and clean up:	Absorb spillage with non-combustible, absorbent material. Dike for later disposal.All equipment used when handling the product must be ground- ed. Eliminate sources of ignition.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling:	Use personal protective equipment as required. Use only with adequate ventilation. Avoid breathing mists or vapors. Flammable/combustible - Keep away from oxidizers, heat and flames.
Conditions for safe storage including any incompatibilities:	No data available

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits:			
Chemical identity	Туре	Exposure Limit Values	Source
Ethanol	STEL	1,000 ррт	US.ACGIH Threshold Limit Values (03 2013)
	REL	1,000 ppm - 1,900 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	1,000 ppm - 1,900 mg/m ³	US. OSHA Table Z-1 Limits for Air Contami- nants (29 CFR 1910.1000) (02 2006)
	TWA	1,000 ppm - 1,900 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	1,000 ppm - 1,900 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	1,910 μg/m³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	l,880 μg/m³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	1,000 ррb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL	1,010 ррb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	TWA PEL	1,000 ppm - 1,900 mg/m³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
Propyl acetate	TWA	200 ррт	US.ACGIH Threshold Limit Values (03 2013)
	STEL	250 ррт	US.ACGIH Threshold Limit Values (03 2013)
	REL	200 ppm - 840 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	250 ppm - 1,050 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	200 ppm - 840 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	STEL	250 ppm - 1,050 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	200 ppm - 840 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	200 ppm - 840 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	250 ppm - 1,050 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	AN ESL	835 μg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL	I,000 μg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL	240 ррb	US.Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	200 ррb	US.Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits:			
Chemical identity	Туре	Exposure Limit Values	Source
Propyl acetate	TWA PEL	200 ppm - 840 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
	STEL	250 ppm 1,050 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
Isopropyl Alcohol	TWA	200 ррт	US.ACGIH Threshold Limit Values (03 2013)
	STEL	400 ррт	US.ACGIH Threshold Limit Values (03 2013)
	REL	400 ppm - 980 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	500 ppm - 1,225 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	400 ppm - 980 mg/m ³	US. OSHA Table Z-1 Limits for Air Contami- nants (29 CFR 1910.1000) (02 2006)
	STEL	500 ppm - 1,225 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	400 ppm - 980 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	500 ppm - 1,225 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	TWA	400 ppm - 980 mg/m ³	US. Tennessee. OELs. Occupational Exposure Limits, Table ZIA (06 2008)
	ST ESL	4,920 μg/m³	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	492 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	ST ESL	2,000 ррb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	AN ESL	200 ррb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (02 2013)
	TWA PEL	400 ppm - 980 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
	STEL	500 ppm - 1,225 mg/m ³	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (02 2012)
Biological limit values:			
Chemical identity:		Exposure Limit Values:	Source
Isopropyl Alcohol (acetone: sampling time: end of shift at end of work week)		40 mg/l (urine)	ACGIH BEL (03 2013)
Appropriate engineering controls:		No data available	
Individual protection measures, such as personal protec		ctive equipment:	
General information:		No data available	
Eye/face protection:		No data available	
Skin/hand protection:		No data available	
Respiratory protection:		No data available	
Hygiene measures:		No data available	

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

General information:		
Appearance and physical state:	Liquid	
Color:	No data available	
Type of Odor:	No data available	
Odor threshold:	No data available	
Important health, safety and environmental infor	mation:	
Initial Boiling Point and Boiling Range:	167-217°F / 75-103°C	
Melting Point/Freezing Point:	No data available	
Flammability Classification:	No data available	
Flash Point:	40°F / 4°C	
Auto-ignition Temperature:	No data available	
Decomposition Temperature:	No data available	
Flammability Limits (lower/upper):	No data available	
Evaporation rate:	No data available	
Vapor Pressure:	No data available	
Vapor Density (Air=1):	No data available	
Octanol/Water Partition Coefficient (log Pow):	No data available	
Specific Gravity:	No data available	
Bulk Density:	No data available	
Water Solubility:	No data available	
pH:	No data available	
Viscosity:	No data available	
Explosive Properties:	No data available	
Oxidizing Properties:	No data available	
Molecular Formula:	No data available	
Molecular Weight:	No data available	
Relative Density:	No data available	

SECTION 10 - STABILITY AND REACTIVITY

Reactivity:	No data available
Stability:	No data available
Possibility of hazardous reactions:	No data available
Conditions to avoid:	No data available
Incompatible materials:	No data available
Hazardous decomposition products:	No data available

SECTION II - TOXICOLOGICAL INFORMATION

Information on toxicological effects: Acute toxicity (list all possible routes of exposure)		
Acute Oral Toxicity:	ATEmix (): 3,457.202505 mg/kg	
Acute Dermal Toxicity:	Not classified for acute toxicity based on available data.	
Acute Inhalation Toxicity:	No data available Specified substance: Ethanol LC50 (Rat, 10 h): 20,000 mg/l LC50 (Mouse, 4 h): 39 mg/l LC50 (Cat,): 85.41 mg/l 2 (reliable with restrictions) LC50 (Rat,): 130.7 mg/l (, No) 2 (reliable with restrictions) LC50 (Mouse,): > 38 mg/l 4 (not assignable)	
Repeated dose toxicity:	No data available	
Skin Corrosion/Irritation:	No data available	
Serious Eye Damage / Eye Irritation:	No data available Specified substance: Propyl acetate Concentration of 200 ppm causes irritation of eyes.	
Respiratory or Skin Sensitization:	No data available	
Germ Cell Mutagenicity:	In vitro: No data available In vivo: No data available	
Carcinogenicity:	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Ethanol: Overall evaluation I. Carcinogenic to humans (when taken orally as a beverage; therefore does not apply to this product).	
	US. National Toxicology Program (NTP) Report on Carcinogens: Ethanol: Known to be Human Carcinogen (when taken orally as a beverage; therefore does not apply to this product).	
	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): No carcinogenic components identified.	
Reproductive Toxicity:	No data available	
Specific Target Organ Toxicity - single exposure (STOT-se):	No data available	
Specific Target Organ Toxicity - repeated exposure (STOT-re):	No data available	
Aspiration Hazard:	No data available	
Potential Health Effects:		
Skin Contact:	No data available	
Eye Contact:	No data available	
Ingestion:	No data available	
Inhalation:	No data available	
Other effects:	No data available	

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity:		
Acute/prolonged toxicity to fish:	Specified substance: Ethanol LC50 (Fathead minnow (Pimephales promelas), 1 h): > 18,000 mg/l Mortality LC50 (Zebra danio (Danio rerio), 2 h): > 100 mg/l Mortality LC50 (Zebra danio (Danio rerio), 2 h): > 100 mg/l Mortality LC50 (Rainbow trout, donaldson trout (Oncorhynchus mykiss), 4 d): 42 mg/l Mortality LC50 (Zebra danio (Danio rerio), 4 h): > 100 mg/l Mortality	
	Specified substance: Propyl acetate LC50 (Fathead minnow (Pimephales promelas), 24 h): 70 mg/l Mortality LC50 (Fathead minnow (Pimephales promelas), 48 h): 66 mg/l Mortality LC50 (Fathead minnow (Pimephales promelas), 96 h): 56 - 64 mg/l Mortality LC50 (Carp (Leuciscus idus melanotus), 48 h): 194 mg/l Mortality LC50 (Carp (Leuciscus idus melanotus), 48 h): 97 mg/l Mortality	
	Specified substance: Isopropyl Alcohol LC50 (Fathead minnow (Pimephales promelas), I h): 11,830 mg/l Mortality LC50 (Fathead minnow (Pimephales promelas), 24 h): 10,600 mg/l Mortality LC50 (Fathead minnow (Pimephales promelas), 24 h): 11,160 mg/l Mortality LC50 (Harlequinfish, red rasbora (Rasbora heteromorpha), 24 h): 7,100 mg/l Mortality LC50 (Bluegill (Lepomis macrochirus), 24 h): >1,400 mg/l Mortality	
Acute/prolonged toxicity to aquatic invertebrates:	Specified substance: Ethanol LC50 (Water flea (Daphnia magna), 216 h): 232 - 814 mg/l Mortality LC50 (Water flea (Ceriodaphnia dubia), 240 h): 1,284 - 2,638 mg/l Mortality LC50 (Water flea (Daphnia magna), 48 h): 12,813 - 15,804 mg/l Mortality LC50 (Brine shrimp (Artemia franchiscana), 48 h): 25.5 mg/l Mortality LC50 (Water flea (Ceriodaphnia dubia), 48 h): 3,046 - 4,432 mg/l Mortality	
	Specified substance: Propyl acetate LC50 (Water flea (Daphnia magna), 24 h): 511 mg/l Mortality LC50 (Brine shrimp (Artemia salina), 24 h): 820 mg/l Mortality	
	Specified substance: Isopropyl Alcohol LC50 (Water flea (Daphnia magna), 24 h): > 10,000 mg/l Mortality LC50 (Common shrimp, sand shrimp (Crangon crangon), 48 h): 900 - 1,950 mg/l Mortality LC50 (Common shrimp, sand shrimp (Crangon crangon), 96 h): 750 - 1,650 mg/l Mortality LC50 (Brine shrimp (Artemia salina), 24 h): >10,000 mg/l Mortality	
Chronic toxicity to the aquatic environment (fish, aquatic invertebrates, aquatic plants):	No data available	
Persistence and degradability:	No data available	
BOD/COD ratio:	No data available	
Bioaccumulative potential:	Bioconcentration factor (BCF): No data available	
Partition coefficient n-octanol/water (log Kow):	Ethanol: -0.31 / Propyl acetate: 1.23 / Isopropyl Alcohol: 0.05	
Mobility in soil:	No data available	
Known or predicted distribution to environmental compartments (Ethanol, Propyl acetate, Propan-2-ol):	No data available	

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste treatment methods:		
Disposal:	No data available	
Container Disposal:	No data available	

SECTION 14 - TRANSPORT INFORMATION

DOT:		
UN number:	UN 1170	
DOT Proper Shipping Description:	Ethanol	
Hazard Class:	3	
Placard:	3	
Packing group:	I	
Marine Pollutant:	Not regulated	

SECTION 15 - REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:				
Hazard categories				
US Federal Regulations:				
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):		None present or none present in regulated quantities.		
CERCLA Hazardous Su	ıbstance List	Chemical identity:	Regulated Quantity:	
(40 CFR 302.4):		Ethanol	100 lbs.	
		Propyl acetate	100 lbs.	
		Isopropyl Alcohol:	100 lbs.	
Superfund amendments 1986 (SARA) Hazard ca	and reauthorization act of ategories:	Not listed		
SARA 302 Extremely h	azardous substance:	None present or none present in regulated quantities.		
SARA 304 Emergency	release notification:	Chemical identity:	RQ:	
		Ethanol	100 lbs.	
		Propyl acetate	100 lbs.	
		Isopropyl Alcohol:	100 lbs.	
SARA 311/312 Hazardo	ous chemical:	Chemical identity:	Threshold Planning Quantity:	
		Ethanol	100 lbs.	
		Propyl acetate	100 lbs.	
		Isopropyl Alcohol:	100 lbs.	
SARA 313 (TRI reporting):				
Chemical identity:	Reporting threshold for other users:	Reporting threshold for manufacturing and processing:		
Isopropyl Alcohol	10,000 lbs.	25,000 lbs.		
Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):		None present or none present in regulated quantities.		
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):		None present or none present in regulated quantities.		

SECTION 15 - REGULATORY INFORMATION

US state regulations:		
US. California Proposition 65:	Used as directed, this product will NOT expose you to chemicals known	
	Ethanol:	Carcinogenic (when taken orally as a beverage; therefore does not apply to this product)
	Ethanol:	Developmental toxin (when taken orally as a beverage; therefore does not apply to this product)
	NOTE: Ethanol - listing refer consumption and is not appl	s specifically to alcoholic beverage icable for product.
US. New Jersey Worker and Community Right-to-	Ethanol:	Listed
Know Act:	Propyl acetate:	Listed
	Isopropyl Alcohol:	Listed
US. Massachusetts RTK - Substance List:	Ethanol:	Listed
	Propyl acetate:	Listed
US. Pennsylvania RTK - Hazardous Substances:	Ethanol:	Listed
	Propyl acetate:	Listed
US. Rhode Island RTK:	No ingredient regulated by RI Right-to-Know Law present.	
Inventory status:		
Canada DSL Inventory List:	Not in compliance with the	inventory.
EU EINECS List:	Not in compliance with the inventory.	
EU ELINCS List:	On or in compliance with the inventory.	
Japan (ENCS) List:	Not in compliance with the	inventory.
EU No Longer Polymers List:	Not in compliance with the inventory.	
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.	
Korea Existing Chemicals Inv. (KECI):	Not in compliance with the inventory.	
Canada NDSL Inventory:	Not in compliance with the inventory.	
Philippines PICCS:	Not in compliance with the inventory.	
US TSCA Inventory:	On or in compliance with th	e inventory.
New Zealand Inventory of Chemicals:	Not in compliance with the inventory.	
Japan ISHL Listing:	Not in compliance with the inventory.	
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.	

SECTION 16 - OTHER INFORMATION

HMIS Hazard ID:		
Health:	*	
Flammability:	3	
Reactivity:	0	
Personal Protection: K (Hood, Gloves, Protective Suit & Boots)		
Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *Chronic health effect		

Disclaimer:

The information contained in this SDS is based on data from sources considered to be reliable but Rupert, Gibbon & Spider, Inc. does not guarantee the accuracy or completeness thereof. Rupert, Gibbon & Spider, Inc. urges each customer or recipient of this SDS to study it carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire and understand the data in this SDS.

Revision Date: 09/26/2019

Abbreviations:	
ACGIH	American Conference of Governmental Industrial Hygienists
ADR	International carriage of Dangerous goods by Road
AICS	Australian Inventory of Chemical Substances
ATE	Acute Toxicity Estimate
BfR	Bundesinstitut für Risikobewertung recommendations for food contact materials
BCF	Bioconcentration Factor
BOD5	5-day Biochemical Oxygen Demand
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CLP	Classification, Labeling and Packaging regulation
COD	Chemical Oxygen Demand DOT Department of Transportation DSL Domestic Substances List
EINECS	European Inventory of Existing Chemical Substances
ECL	Existing Chemicals List (Korea)
ENCS	Existing and New Chemical Substances Inventory (Japan)
EN 689	Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy.
ERG	Emergency Response Guide
GHS	Globally Harmonized System
HMIS	Hazardous Materials Information System IARC International Agency for Research on Cancer IATA International Air Transport Association
ICAO	International Civil Aviation Organization IDLH Immediately Dangerous to Life and Health IMDG International Maritime Dangerous Goods
LD50	Lethal Dose to 50% of test animal population
МАК	Maximale Arbeitsplatz Konzentration
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety & Health Administration
РВТ	Persistent, Bioaccumulative and Toxic vPvB Very Persistent and Very Bioaccumulative PEL Permissible exposure limit
PICCS	Philippine Inventory of Commercial Chemical Substances
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorization of Chemical Substances
RID	International carriage of dangerous goods by Rail SARA Superfund Amendments and Reauthorization Act STEL Short Term Exposure Limit
SVHC	Substance of Very High Concern
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
VOC	Volatile Organic Compound
WGK	Wassergefahrdungsklasse (Water Hazard Class) WHMIS Workplace Hazardous Material Identification System

SAFETY DATA SHEET

in acc. with Regulation (EU) No. 2015/830

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Tradename: CULR[™] Art Pigment for Epoxy – Indigo Blue

SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1.	Product identifier	
	Tradename:	CULR™ Art Pigment for Epoxy – Indigo Blue
	Chemical	
	characterisation:	C.I. Pigment Blue 15 and Calciumcarbonat in aqueous dispersion, contenting Polyglykol and 1,2-Propandiol.

1.2. Relevant identified uses of the substance or mixture and uses advised again

Relevant identified uses of the substance or mixture:			
Industry sector: Industrial Performance Chemicals			
	Paints, lacquers and varnishes industry		
Polymers industry			
Printing Inks Industry			
Type of use:	Colourant preparation		

1.3. Details of the supplier of the safety data sheet

<u>Identification of the company:</u> Easy Composites Ltd Unit 39 Park Hall Business Village Stoke on Trent, ST3 5XA. United Kingdom. Phone: +44 (0)1782 4544499

Information to substance / mixture: Division: Technical E-mail: technical@glasscastresin.com

1.4. Emergency telephone number Emergency CONTACT (Office Hours) Phone: +44 (0)1782 4544499

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance / mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Categoryof danger	Category HazardSymbol	H-Phrases

Not a hazardous substance or mixture.

2.2. Label elements

Labelling according CLP regulation (Regulation (EC) No. 1272/2008, as amended): Not a hazardous substance or mixture.

Additional Labelling:

EUH 208 contains mixture of:

1,2-Benzisothiazol-3(2H)-one, mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1). May produce an allergic reaction.

Safety data sheet available on request.

EUH210:

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1 % or higher.

No hazards to be specially mentioned.



CULR[™] Art Pigment for Epoxy – Indigo Blue Tradename:

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SECTION 3: COMPOSITION / INFORMATION TO INGREDIENTS

3.1. Mixtures

Hazardous ingredients:

Alcohols, C16-18 and C18-unsaturated, ethoxylated (8 EO) %

Concentration:	≥ 13,1 - ≤ 18,0
CAS-Number:	68920-66-1
EC-Number:	500-236-9

GHS classification EC:

Skin irritation	Category 2	H315
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 3	H412
M-Factor (Acute aquatic toxicity)		1

M-Factor (Acute aquatic toxicity)

1,2-Benzisothiazolin-3-on

Concentration:	≥ 0,0025 - ≤ 0,025 %
CAS-Number:	2634-33-5
EC-Number:	220-120-9
INDEX-No.:	613-088-00-6
Registrationnumber:	01-2120761540-60

GHS classification EC:

Acute toxicity	Category 4	H302
Fatal ifinhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 2	H411

Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1)

Concentration: CAS-Number: EC-Number: INDEX-No.: Registrationnumber:

≥ 0,0002 - ≤ 0,0015 % 55965-84-9 611-341-5 613-167-005 01-2120764691-48

GHS classification EC:

Acute toxicity	Category 3	H301
Acute toxocity	Category 2	H310
Fatal ifinhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314
May cause an alergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category1	H410

The text of H-phrases is shown in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Discription of first aid measures

General information:

Get medical advice/ attention if you feel unwell.

After inhalation:

Move the victim to fresh air.

If you feel unwell, seek medical advice (show the label where possible).

After contact with skin:

In case of contact with skin, clean with plenty of soap and water.

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After contact with eyes:

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

<u>After ingestion:</u> If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed symptoms

Symptoms:

None known. Hazards:

None known.

4.3. Indication of any immediate medical attention and special treatment needed <u>Treatment:</u>

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray jet Dry powder Carbon dioxide (CO₂) Alcohol resistant foam

Extinguishing media that must not be used for safety reasons: High volume water jet

5.2. Special hazards arising from the substance or mixture

In case of fires, hazardous combustion gases are formed: Carbon oxides (CO_x) Nitrogen oxides (NO_x)

5.3. Advice for firefighters Special protective equipment for firefighting:

Use self-contained breathing apparatus.

<u>Further information:</u> Wear suitable protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures Wear suitable personal protective equipment.

6.2. Environment precautions The product should not be allowed to enter drains, water courses or the soil.

6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Treat recovered material as described in the section "Disposal considerations".

Treat recovered material as described in the section. Disposal considera

6.4. Reference to other sections <u>Additional information:</u> Information regarding safe handling, see chapter 7.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling:

When used and handled appropriately no special measures are needed.

Hygiene measures:

Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

<u>Further information on storage conditions:</u> Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Keep away from flames and sparks.

Storage stability:

Minimum 36 months.

7.3. Specific end use(s)

No further recommendations.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

<u>Exposure limit values:</u> Exposure limit values are not available.

DNEL / DMEL-values:

1,2-Benzisothiazol-3(2H)-one EC-Number: 220-120-9 CAS-Number: 2634-33-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	6,81 mg/m ³	DNEL
Dermal	Workers	Long-term systemic effects	0,966 mg/kg bw/day	DNEL
Inhalation	Consumers	Long-term systemic effects	1,2 mg/m ³	DNEL
Dermal	Consumers	Long-term systemic effects	0,345 mg/kg bw/day	DNEL

Silica, amorphous, fumed, crystalline free EC-Number: 601-216-3 CAS-Number: 112945-52-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	4 mg/m ³	DNEL

<u>PNEC-values:</u>

Silica, amorphous, fumed, crystalline free EC-Number: 601-216-3 CAS-Number: 112945-52-5

Environmental compartment	Value
Secondary poisoning	60.000 mg/kg (food)

CULR[™] Art Pigment for Epoxy – Indigo Blue Tradename:

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1,2-Benzisothiazol-3(2H)-one EC-Number: 220-120-9 CAS-Number: 2634-33-5

Environmental compartment	Value
Fresh water	0,00403 mg/l
Marine water	0,000403 mg/l
Intermittend use/release	0,0011 mg/l
Sewage treatment plant	1,03 mg/l
Fresh water sediment	0,0499 mg/kg dry weight (d.w.)
Marine sediment	0,00499 mg/kg dry weight (d.w.)
Soil	3 mg/kg dry weight (d.w.)

Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) EC-Number: 611-341-5 CAS-Num

AS-Number:	55965-84-9

Environmental compartment	Value
Fresh water	0,049 µg/l
Marine water	0,0098 µg/l
Sewage treatment plant	0,045 µg/l
Soil	0,009 µg/l

8.2. Exposure controls

Appropriate engineering controls:

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

General protective measures:

Wear suitable protective equipment.

Respiratory protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection:

Nitrile rubber

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection:

Safety glasses

Body protection:

Wear suitable protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Form:	liquid
Colour:	blue
Odour:	not significant
Odour threshold:	not required
pH value:	not measured
Melting point:	not applicable
Boiling point:	approx. 100 °C
Flash point:	> 100 °C
Evaporation rate:	not determined
Flammability:	not determined
Lower explosion limit:	not determined
Upper explosive limit:	not determined

Tradena	ame: CULR [™] Art Pigme	nt for Epoxy – Indigo Blue	page 6/20
	Combustion number: Minimum ignition energy:	not applicable not determined	
	Vapour pressure:	not determined	
	Vapour density relative to air:	not determined	
	Relative Density:	no data available	
	Solubility in water:	miscible	
	Octanol/ water partition coefficient (log Pow): Ignition temperature: Thermal decomposition: Viscosity (dynamic):	not determined not determined > 100 °C not tested	
	Oxidizing properties:	no data available	
9.2.	Other information	1.22 a/cm ³ (20 °C)	
	Density.	1,22 groun (20 C)	

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

- **10.2.** Chemical Stability Stable under normal conditions.
- **10.3.** Possibility of hazardous reactions No dangerous reaction known under conditions of normal use. Stable.
- **10.4.** Conditions to avoid None known.
- **10.5.** Incompatible Materials No data available.
- **10.6. Hazardous decomposition products** No decomposition if stored and applied as directed.

SECTION 11: TOXICOLOGIC INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Informations related to the product:

Acute oral toxicity:	Remarks: no data available
Acute inhalation toxicity:	Remarks: no data available
Acute dermal toxicity:	Remarks: no data available
Informations related to the component	t 1,2-Benzisothiazol-3(2H)-one:
Acute oral toxicity:	LD50 (Rat, male and female): 670 - 784 mg/kg
	Method: OECD Test Guideline 401
	GLP: yes
Acute inhalation toxicity:	LC50 (Rat, male and female): 0,5 mg/l
-	Exposure time: 4 h
	Test atmosphere: dust/mist
	Method: OPPTS 870.1300
	GLP: yes
Acute dermal toxicity:	LD50 (Rat, male and female): > 2.000 mg/kg
	GLP: yes
	Assessment: The substance or mixture has no acute dermal toxicity.

Informations related to the component	mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and	
<u>2-methyl-2H-isothiazol-3-one (3:1):</u>		
Acute oral toxicity:	LD50 (Rat): 64 mg/kg	
Acute inhalation toxicity:	LC50 (Rat, male and female): 0,171 mg/l	
-	Exposure time: 4 h	
	Test atmosphere: dust/mist	
Acute dermal toxicity:	LD50 (Rabbit): 92,4 mg/kg	
Skin corrosion/irritation		
Informations related to the product:		
Species:	EPISKIN Human Skin Model Test	
	Method: OECD Test Guideline 439	
	Result: No skin irritation	
	Remarks: The toxicological data has been taken	
	from products of similar composition.	
Species:	Rabbit	
	Method: OECD Test Guideline 404	
	Result: No skin irritation	
	Remarks: The toxicological data has been taken	
	from products of similar composition.	
Informations related to the component	Alcohols, C16-18 and C18-unsaturated, ethoxylated:	
Result:	Irritating to skin.	
Informations related to the component	1,2-Benzisothiazol-3(2H)-one:	
Species:	Rabbit	
	Exposure time: 4 h	
	Result:Irritating to skin.	
	GLP:yes	
Informations related to the component	mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and	
<u>2-methyl-2H-isothiazol-3-one(3:1):</u>	D 11 %	
Species:	Rabbit	
	Result:Causes burns.	
Serious eye damage/eye irritation		
Informations related to the product:		
Species:	Bovine cornea	
	Method: OECD Test Guideline 437	
	Result: No eye irritation	
	Remarks: The toxicological data has been taken	
	from products of similar composition.	
Species:	rabbit eye	
	Method: OECD Test Guideline 405	
	Result: No eye irritation	
	Remarks: The toxicological data has been taken	
	from products of similar composition.	
Informations related to the component	1,2-Benzisothiazol-3(2H)-one:	
Species:	rabbit eye	
	Exposure time: 2,9 h - 11 d	
	Result: Risk of serious damage to eyes.	
	GLP: yes	
Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and		
<u>2-methyl-2H-isothiazol-3-one(3:1):</u>		
Species:	rabbit eye	
	Result: Risk of serious damage to eyes.	

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Respiratory or skin sensitisation	
Remarks:	no data available
Informations related to the component	t 1.2 Renzisathiazal 3(2H) ana:
Test Type:	Guinea pig maximization test Exposure routes: Dermal
Species:	Guinea pig Method: Other ResulT: May cause sensitisation by skin contact. GLP: yes
Informations related to the componer	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-
methyl-2H-isothiazol-3-one(3:1):	
Species:	Guinea pig Method: Other Result: The product is a skin sensitiser, sub-category 1A. Assessment: Toxic if swallowed, Fatal in contact with skin, Fatal ifinhaled, Causes severe skin burns and eye damage. May cause an allergic skin reaction.
Germ cell mutagenicity	
Informations related to the product:	
Genotoxicity in vitro: Germ cell mutagenicity-	Remarks: no data available
Assessment:	
Informations related to the componer	<u>It 1,2-Benzisothiazol-3(2H)-one:</u>
Genotoxicity in vitro:	Test Type: Mouse lymphoma assay Test system: mouse lymphoma cells Concentration: 0,1 - 12,8 µg/ml
Metabolic activation:	
with and without metabolic	
activation:	Method: OECD Test Guideline 476 Result: negative GLP: yes Test Type: Ames test
	Test system: Salmonella typhimurium Concentration: 0.064 - 200 ug/plate
Metabolic activation:	
with and without metabolic	
activation:	Method: OECD Test Guideline 471 Result: negative GLP: yes
	Test Type: Chromosome aberration test in vitro Test system: Human lymphocytes Concentration: 1 - 40 µg/ml
Metabolic activation:	
with and without metabolic	Mathady OFOD Tast Cylidalina 472
activation:	Result: positive GLP: yes
Genotoxicity in vivo:	Test Type: Other Species: Rat (male) Strain: wistar Cell type: Liver cells

v	
	Application Route: Ingestion Exposure time: single dose Dose: 560 - 1400 mg/kg Method: OECD Test Guideline 486 Result: negative GLP: yes
	Test Type: Micronucleus test Species: Mouse (male and female) Strain: CD1 Cell type: Bone marrow Application Route: Ingestion Exposure time: single dose Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes
Germ cell mutagenicity-	Did not show mutagenic effects in animal experiments
Informations related to the componen	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
2-methyl-2H-isothiazol-3-one(3:1):	
Genotoxicity in vitro: Metabolic activation: with and without metabolic	Test Type: In vitro study
activation:	Result: Conflicting results have been seen in different studies.
Genotoxicity in vivo:	Test Type: Micronucleus test Species: Rat Cell type: Bone marrow Application Route: Oral Exposure time: $\leq 5 d$ Dose: 1-5 x $\leq 28 mg/kg$ Result: negative
	Test Type: Micronucleus test Species: Mouse Application Route: Oral Exposure time: $\leq 5 d$ Dose: 1-5 x $\leq 20 - 30 \text{ mg/kg}$ Result: negative
Germ cell mutagenicity- Assessment:	In vivo tests did not show mutagenic effects
Carcinogenicity Informations related to the product:	
Assessment:	No information available.
Informations related to the componen Carcinogenicity -	t 1,2-Benzisothiazol-3(2H)-one:
Assessment:	Not applicable
Informations related to the componen <u>2-methyl-2H-isothiazol-3-one(3:1)</u> : Carcinogenicity - Assessment:	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and No evidence of carcinogenicity in animal studies.
Reproductive toxicity Informations related to the product:	
Reproductive toxicity - Assessment:	No information available.

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Informations related to the componen	t 1,2-Benzisothiazol-3(2H)-one:
Effects on fertility:	Species: Rat, male Application Route: oral (fed) Dose: 18,5 - 97,8 mg/kg General Toxicity - Parent: NOAEL: 18,5 mg/kg body weight General Toxicity F1: NOAEL: 48 mg/kg body weight Method: Other GLP: yes
	Species: Rat, female Application Route: oral (feed) Dose: 27,0 - 114,8 mg/kg General Toxicity - Parent: NOAEL: 27 mg/kg body weight General Toxicity F1: NOAEL: 56,6 mg/kg body weight Method: Other
Effects on foetal development:	Species: Rat, female Application Route: oral (gavage) Dose: 10 - 40 - 100 mg/kg General Toxicity Maternal: NOAEL: 10 mg/kg body weight Teratogenicity: NOAEL: 40 mg/kg body weight Method: Directive 67/548/EEC, Annex V, B.31. GLP: yes
Reproductive toxicity – Assessment:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments. Embryotoxicity classification not possible from current data.
Informations related to the componen	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>2-methyl-2H-isothiazol-3-one(3:1):</u> Effects on fertility:	Species: Rat, male and female Application Route: Drinking water Dose: 25 - 75 - 225 ppm General Toxicity - Parent: NOAEL: 16,3 - 24,7 mg/kg body weight General Toxicity F1: NOAEL: 16,3 - 24,7 mg/kg body weight Method: Other GLP: yes
	 Species: Rat, male and female Application Route: Drinking water Dose: 30 - 100 - 300 ppm General Toxicity - Parent: NOAEL: 2,8 - 4,4 mg/kg body weight General Toxicity F1: NOAEL: 22,7 - 28 mg/kg body weight General Toxicity F2: NOAEL: 35,7 - 39,1 mg/kg body weight Method: OECD Test Guideline 416 GLP: ves
Effects on foetal development:	Species: Rat, male and female Application Route: oral (gavage)
Developmental Toxicity:	NOAEL: 15 mg/kg body weight Method: Other

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Reprode	uctive toxicity – Assessment:	Species: Rat, male and female Application Route: oral (gavage) General Toxicity Maternal: NOAEL: ≤ 3,95 mg/k body weight Method: Other Weight of evidence does not support classification reproductive toxicity Embryotoxicity classification not possible from c data.	g on for urrent	
STOT - s <u>Informa</u> Remark	ingle exposure tions related to the componen	<u>t product:</u> no data available		
<u>Informa</u> Assessr	tions related to the componen nent:	t <u>1,2-Benzisothiazol-3(2H)-one:</u> The substance or mixture is not classified as spe target organ toxicant, single exposure.	ecific	
Informa <u>2-methy</u>	tions related to the componen /I-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-on	<u>ie and</u>	
Assessi	nent:	target organ toxicant, single exposure.	SCILIC	
STOT - re <u>Informa</u> Remark	epeated exposure tions related to the componen	t product:		
Remark	S.			
Informa Assessr	tions related to the componen nent:	The substance or mixture is not classified as spe target organ toxicant, repeated exposure.	ecific	
<u>Informa</u> 2-methy	tions related to the componen /I-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-on	<u>ie and</u>	
Assess	nent:	The substance or mixture is not classified as spe target organ toxicant, repeated exposure.	ecific	
Repeated	d dose toxicity			
<u>Informa</u>	tions related to the product:			
Remark	s:	This information is not available.		
<u>Informa</u> Species	<u>tions related to the componen</u>	t 1,2-Benzisothiazol-3(2H)-one: Dog, male and female NOAEL: 5 mg/kg LOAEL: 20 mg/kg Application Route: oral (gavage) Exposure time: 90 d Number of exposures: daily Dose: 5 - 20 - 50 mg/kg Group: yes Method: 88/302/EC GLP: yes		
<u>Informa</u> 2-methy	tions related to the componen (I-2H-isothiazol-3-one(3·1)·	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-on	e and	
Species	<u> </u>	Rat, male and female NOAEL: 16,3 - 24,7 mg/kg ApplicationRoute: Drinking water Exposure time: 90 d Number of exposures: daily Dose: 25 - 75 - 225 ppm Group: yes		
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Method: Other GLP: yes

Aspiration toxicity

Informations related to the product: no data available

Informations related to the component 1,2-Benzisothiazol-3(2H)-one: No aspiration toxicity classification

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): No aspiration toxicity classification

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Informations related to the product: Toxicity to fish: Toxicity to daphnia and other aquatic invertebrates: Toxicity to algae: Toxicity to fish (Chronic toxicity): Toxicity to microorganisms:	Remarks: no data available Remarks: no data available Remarks: no data available Remarks: no data available Remarks: no data available
Informations related to the componen M-Factor (Acute aquatic toxicity): Ecotoxicology Assessment Acute aquatic toxicity: Chronic aquatic toxicity:	t Alcohols, C16-18 and C18-unsaturated, ethoxylated: 1 Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Informations related to the componen Toxicity to fish :	t 1,2-Benzisothiazol-3(2H)-one: LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes LC50 (Cyprinodon variegatus (sheepshead minnow)): approx.16,7 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates:	Analytical monitoring: yes Method: No information available. GLP: yes EC50 (Daphnia magna (Water flea)): 2,94 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes EC0 (Daphnia magna (Water flea)): 0,643 mg/l Exposure time: 48 h
	Test Type: static test Analytical monitoring: yes

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			Method: OECD Test Guideline 202 GLP: yes	
			EC50 (Mysidopsis bahia (opossum shrimp)): 0,9893 Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water	mg/l
Toxicity	to algae:		NOEC (Mysidopsis bahia (opossum shrimp)): 0,25 m Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water EC50 (Selenastrum capricornutum (green algae)): 0,155 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes	ng/l
			NOEC (Selenastrum capricornutum (green algae)): 0,055 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes	
M-Facto (Acut Toxicity	r æ aquatic to to microorg	oxicity): janisms:	1 EC50 (activated sludge of a predominantly domestic sewage): 23 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Analytical monitoring: no Method: OECD Test Guideline 209 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.	;
			EC50: > 811,5 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.	
			NOEC: 263,7 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil	

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		Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect nominal concentration.	relate to the
Toxicit (Ch	y to fish ironic toxicity):	NOEC: 0,21 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow Analytical monitoring: yes Method: OECD Test Guideline 215 GLP: yes	v trout)
Toxicit aqu (Ch	y to daphnia and other latic invertebrates lronic toxicity):	NOEC: 1,2 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes	
		NOEC: 1,9 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes	
Toxicit org	y to soil dwelling anisms:	Test Type: artificial soil LC50: > 410,6 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect nominal concentration.	relate to the
		Test Type: artificial soil NOEC: 234,5 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect nominal concentration.	relate to the
Plant t	oxicity:	EC50: 340 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect nominal concentration.	relate to the

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			NOEC: 90 mg/ Exposure time: End point: Grov Species: Phase Analytical mon Method: OECE GLP:yes Remarks: The nominal cor	kg : 20 d wth eolus vulgaris itoring: yes) Guide-line 208 details of the toxic effect relate ncentration.	e to the	3
			EC50: 300 mg/ Exposure time: End point: Grov Species: Triticu Analytical mon Method: OECD GLP: yes Remarks: The nominal cor	/kg : 19 d wth um aestivm (wheat) itoring: yes) Guide-line 208 details of the toxic effect relate ncentration.	e to the	2
			NOEC: 51 mg/ Exposure time: End point: Grov Species: Triticu Analytical mon Method: OECD GLP:yes Remarks: The nominal cor	kg : 19 d wth um aestivm (wheat) itoring: yes) Guide-line 208 details of the toxic effect relate ncentration.	e to the	•
Sedim	ent toxicity:		Remarks: not a	available		
Ecotox Acu Chr	ticology Asse te aquatic to onic aquatic	essment oxicity: toxicity:	Very toxic to ac Toxic to aquati	quatic life. c life with long lasting effects.		
Informa 2 meth	ations related	d to the componer	nt mixture of: 5-cl	hloro-2-methyl-2H-isothiazol-3	8-one a	<u>nd</u>
Toxicit	y to fish:	<u>2201-0-011c(0.1).</u>	EC50 (Oncorh) Exposure time: Method: OECC	ynchus mykiss (rainbow trout) : 96 h) Test Guideline 203): 0,22	mg/l
Toxicit	v to daphnia	and other				
aqu 	iatic inverteb	rates:	EC50 (Daphnia Exposure time: Method: OECD	a magna (Water flea)): 0,1 mg : 48 h) Test Guideline 202	/I	
loxicit	y to algae:		EC50 (Skeletor 0,0052 mg/l Exposure time: Test Type: stat Method: OECD	nema costatum (marine diator l : 48 h tic test) Test Guideline 201	n)):	
			NOEC (Skeleto 0,00049 mg Exposure time: Test Type: stat Method: OECD	onema costatum (marine diato g/l : 48 h tic test) Test Guideline 201	vm)):	
M-Fac (Ac Toxicit	tor ute aquatic to y to microorg	oxicity): ganisms:	100 EC50 (activate Exposure time: Method: OECE	d sludge): 7,92 mg/l : 3 h) Test Guideline 209		

Toxicity to fish (Chronic toxicity):	ad other	NOEC: 0,098 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Method: OECD Test Guideline 215
aquatic invertebra (Chronic toxicity):	id other tes	NOEC: 0,004 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
M-Factor (Chronic aquatic to Tovisity to soil dwellin	oxicity):	10
organisms:	g	LC50: 86,6 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207
		NOEC: 8,83 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) OECD Test Guideline 207
Ecotoxicology Assess Acute aquatic toxic Chronic aquatic to	sment city: xicity:	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
12.2. Persistence and degr	adability	
Informations related to Biodegradability:	o the product:	no data available
Informations related t	o the component	t 1 2-Benzisothiazol-3/2H)-one:
Biodegradability:		Test Type: aerobic Inoculum: activated sludge Concentration: 1 mg/l Result: Partially biodegradable. Exposure time: 63 d Method: OECD Test Guideline 301C GLP: ves
Physico-chemical ren Stability in water:	novability:	Remarks: Biodegradable Test Type: abiotic Degradation half life: 219 d pH: 4 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
		Test Type: abiotic Degradation half life: > 200 d pH: 7 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
		Test Type: abiotic Degradation half life: 145 d pH: 9 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes

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Photodegradation:	Test Type: water Light source: Xenon lamp Light spectrum: 290 - 400 nm Degradation (direct photolysis): < 1,5 % GLP: yes
	Test Type: air Method: calculated GLP: no Remarks: Decomposes rapidly in contact with light.
Informations related to the compone 2-methyl-2H-isothiazol-3-one(3:1):	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Biodegradability:	Test Type: aerobic Inoculum: activated sludge Result: Not rapidly biodegradable Method: OECD Test Guideline 301B
Photodegradation:	Test Type: water Light source: Sunlight
12.3. Bioaccumulative potential Informations related to the product:	
Bioaccumulation:	no data available
Informations related to the component Bioaccumulation:	nt 1,2-Benzisothiazol-3(2H)-one: Species: Lepomis macrochirus (Bluegill sunfish) Exposure time: 56 d Concentration: 0,1 mg/l Bioconcentration factor (BCF): 6,62 Method: OECD Test Guideline 305 GLP: no Remarks: Due to the distribution coefficient n-octanol/water,accumulation in organisms is not expected.
Informations related to the componer	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>z-metryi-zn-isotniazoi-s-one(s. r).</u> Bioaccumulation:	Bioconcentration factor (BCF): 3,6 Method: calculated Remarks: Does not accumulate in organisms
Partition coefficient	Remarks. Does not accumulate in organisms.
n-octanol/water:	log Pow: -0,71 - 0,75 Method: OECD Test Guideline 107
12.4. Mobility in soil Informations related to the compone	nt 1,2-Benzisothiazol-3(2H)-one:
environmental compartments:	Adsorption/Soil Medium: water – soil Koc: 235 – 566 Method: Other
12.5. Results of PBT and vPvB assessment Informations related to the product: This substance/mixture contains no of bioaccumulative and toxic (PBT), or of 0,1 % or higher.	ent components considered to be either persistent, very persistent and very bioaccumulative (vPvB) at levels
Informations related to the component	nt 1,2-Benzisothiazol-3(2H)-one:
Assessment:	The substance is not identified as a PBT or as a vPvB substance.

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	Informations related to the componer	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	2-methyl-2H-isothiazol-3-one(3:1):	
	Assessment:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
12.6.	Other adverse effects	
	Informations related to the product:	
	Environmental fate and pathways:	no data available
	Additional ecological information:	no data available
	Informations related to the componer	nt 1,2-Benzisothiazol-3(2H)-one:
	Environmental fate andpathways:	not available
	Additional ecological information:	Do not allow to enter ground water, waterways or waste water.
	Informations related to the componer	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	<u>2-methyl-2H-isothiazol-3-one(3:1):</u>	
	Additional ecological information:	The product should not be allowed to enter drains, watercourses or the soil.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product:

Dispose of in accordance with the European Directives on waste and hazardous waste.

Uncleaned packaging:

This material and its container must be disposed of in a safe way.

SECTION 14: TRANSPORT INFORMATION

14.1. to 14.5.

ADR:	not restricted
ADN:	not restricted
RID:	not restricted
IATA:	not restricted
IMDG:	not restricted

14.6. Special precautions for users

See sections 6 to 8 of this Safety Data Sheet.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No transport as bulk according IBC-Code.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of
Very High Concern for Authorisation (Article 59):
REACH - List of substances subject to authorisation

(Annex XIV):
Regulation (EC) No 1005/2009 on substances that
deplete the ozone layer:
Regulation (EC) No 850/2004 on persistent
organic pollutants:

Not applicable

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

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15.2. Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

SECTION 16: OTHER INFORMATION

Observe the legal requirements nationally and locally.

List of the text of the hazard statements mentioned section 3 (H-phrases):

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.:	Acute toxicity
Aquatic Acute:	Short-term (acute) aquatic hazard
Aquatic Chronic:	Long-term (chronic) aquatic hazard
Eye Dam.:	Serious eye damage
Skin Corr.:	Skin corrosion
Skin Irrit.:	Skin irritation
Skin Sens.:	Skin sensitisation
STOT RE:	Specific target organ toxicity - repeated exposure

Change compared to the previous version:

Change in the composition

Legend

ADN	European Agreement concerning the International Carriage of
	Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of
	Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ASTM	American Society for the Testing of Materials
bw	Body weight
CLP	Classification Labelling Packaging Regulation
	Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DIN	Standard of the German Institute for Standardisation
DMEL	Derived Minimal Effect Level (genotoxic substances)
DNEL	Derived No Effect Level
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC-Number	European Community number
ECx	Concentration associated with x% response
ELx	Loading rate associated with x% response
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
ErCx	Concentration associated with x% growth rate response
GHS	Globally Harmonized System
GLP	Good Laboratory Practice
IARC	International Agency for Research on Cancer

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Tradename:	CULR [™] Art Pigment for Epoxy – Indigo Blue	page	20/20
ΙΑΤΑ	International Air Transport Association		
IBC	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk		
IC50	Half maximal inhibitory concentration		
ICAO	International Civil Aviation Organization		
IECSC	Inventory of Existing Chemical Substances in China		
IMDG	International Maritime Dangerous Goods		
IMO	International Maritime Organization		
ISHL	Industrial Safety and Health Law (Japan)		
ISO	International Organisation for Standardization		
KECI	Korea Existing Chemicals Inventory		
LC50	Lethal Concentration to 50 % of a test population		
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)		
MARPOL	International Convention for the Prevention of Pollution from Ships		
n.o.s.	Not Otherwise Specified		
NO(A)EC	No Observed (Adverse) Effect Concentration		
NO(A)EL	No Observed (Adverse) Effect Level		
NUELK	No Observable Effect Loading Rate		
	Organization for Economic Colonaration and Development		
	Office of Chemical Safety and Pollution Prevention		
PRT	Persistent Bioaccumulative and Toxic substance		
PICCS	Philippines Inventory of Chemicals and Chemical Substances		
(O)SAR	(Quantitative) Structure Activity Relationship		
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the	1e	
	Council concerning the Registration. Evaluation. Authorisation and	10	
	Restriction of Chemicals		
RID	Regulations concerning the International Carriage of Dangerous Go	ods	
	by Rail		
SADT	Self-Accelerating Decomposition Temperature		
SDS	Safety Data Sheet		
TCSI	Taiwan Chemical Substance Inventory		
TRGS	Technical Rule for Hazardous Substances		
TSCA	Toxic Substances Control Act (United States)		
UN	United Nations		
vPvB	Very Persistent and Very Bioaccumulative		

Decimal notation: "thousands" places are identified with a dot (for example, "2.000 mg/kg" means "two thousand mg/kg"). Decimal places are identified with a comma (for example, "1,35 g/cm³" means "one point three five g/cm³").

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Easy Composites Ltd makes no warranties, express or implied, as to the information accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of CULR products for its particular application. Nothing included in this information waives any of Easy Composite's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing.

Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing CULR products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products.

For additional information, please contact Easy Composites Ltd.

SAFETY DATA SHEET

in acc. with Regulation (EU) No. 2015/830

Tradename: CULR[™] Art Pigment for Epoxy – Jet Black

SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier

Tradename:	CULR™ Art Pigment for Epoxy – Jet Black
Chemical	
Caracterisation:	C.I. Pigment Black 7 and Calciumcarbonat in aqueous dispersion, contenting Polyglykol and 1,2-Propandiol.

1.2. Relevant identified uses of the substance or mixture and uses advised again

Relevant identified uses of the substance or mixture:Industry sector:Industrial Performance Chemicals
Paints, lacquers and varnishes industry
Polymers industry
Printing Inks IndustryType of use:Colourant preparation

1.3. Details of the supplier of the safety data sheet

Identification of the company: Easy Composites Ltd Unit 39 Park Hall Business Village Stoke on Trent, ST3 5XA. United Kingdom. Phone: +44 (0)1782 454499

<u>Information to substance / mixture:</u> Division: Technical E-mail: technical@glasscastresin.com

1.4. Emergency telephone number Emergency CONTACT (Office Hours) Phone: +44 (0)1782 454499

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance / mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Categoryof danger	Category HazardSymbol	H-Phrases

Not a hazardous substance or mixture.

2.2. Label elements

Labelling according CLP regulation (Regulation (EC) No. 1272/2008, as amended): Not a hazardous substance or mixture.

Additional Labelling:

EUH 208 contains mixture of:

1,2-Benzisothiazol-3(2H)-one,

Safety data sheet available on request.

mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1). May produce an allergic reaction.

EUH210:

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1 % or higher.

No hazards to be specially mentioned.



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SECTION 3: COMPOSITION / INFORMATION TO INGREDIENTS

3.1. Mixtures

Hazardous ingredients:

Alcohols, C16-18 and C18-unsaturated, ethoxylated (8 EO)

Concentration:	≥ 6,2 - ≤ 10,7 %
CAS-Number:	68920-66-1
EC-Number:	500-236-9

GHS classification EC:

Skin irritation	Category 2	H315
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity Category 3		H412
M Faster (Asute aquetic texisity)		1

M-Factor (Acute aquatic toxicity)

1,2-Benzisothiazolin-3-on

Concentration:	≥ 0,0025 - ≤ 0,025 %
CAS-Number:	2634-33-5
EC-Number:	220-120-9
INDEX-No.:	613-088-00-6
Registrationnumber:	01-2120761540-60

GHS classification EC:

Acute toxicity	Category 4	H302
Fatal ifinhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 2	H411

Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1)

Concentration:
CAS-Number:
EC-Number:
INDEX-No.:
Registrationnumber:

≥ 0,0002 - ≤ 0,0015 % 55965-84-9 611-341-5 613-167-005 01-2120764691-48

GHS classification EC:

Acute toxicity	Category 3	H301
Acute toxocity	Category 2	H310
Fatal ifinhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314
May cause an alergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category1	H410

The text of H-phrases is shown in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Discription of first aid measures

General information:

Get medical advice/ attention if you feel unwell.

After inhalation:

Move the victim to fresh air.

If you feel unwell, seek medical advice (show the label where possible).

After contact with skin:

In case of contact with skin, clean with plenty of soap and water.

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After contact with eyes:

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

<u>After ingestion:</u> If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed symptoms

Symptoms:

None known. Hazards:

None known.

4.3. Indication of any immediate medical attention and special treatment needed <u>Treatment:</u>

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray jet Dry powder Carbon dioxide (CO₂) Alcohol resistant foam

Extinguishing media that must not be used for safety reasons: High volume water jet

5.2. Special hazards arising from the substance or mixture

In case of fires, hazardous combustion gases are formed: Carbon oxides (CO_x) Nitrogen oxides (NO_x)

5.3. Advice for firefighters Special protective equipment for firefighting:

Use self-contained breathing apparatus.

<u>Further information:</u> Wear suitable protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures Wear suitable personal protective equipment.

6.2. Environment precautions The product should not be allowed to enter drains, water courses or the soil.

6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Treat recovered material as described in the section "Disposal considerations".

I reat recovered material as described in the section "Disposal considera

6.4. Reference to other sections <u>Additional information:</u> Information regarding safe handling, see chapter 7.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling:

When used and handled appropriately no special measures are needed.

Hygiene measures:

Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

<u>Further information on storage conditions:</u> Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Keep away from flames and sparks.

Storage stability:

Minimum 36 months.

7.3. Specific end use(s)

No further recommendations.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

<u>Exposure limit values:</u> Exposure limit values are not available.

DNEL / DMEL-values: C.I. Pigment Black 7 EC-Number: 215-609-9 CAS-Number: 1333-86-4

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	2 mg/m ³	DNEL
Inhalation	Workers	Long-term local effects	2 mg/m ³	DNEL

1,2-Benzisothiazol-3(2H)-one EC-Number: 220-120-9

CAS-Number: 2634-33-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	6,81 mg/m ³	DNEL
Dermal	Workers	Long-term systemic effects	0,966 mg/kg bw/day	DNEL
Inhalation	Consumers	Long-term systemic effects	1,2 mg/m ³	DNEL
Dermal	Consumers	Long-term systemic effects	0,345 mg/kg bw/day	DNEL

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Silica, amorphous, fumed, crystalline free EC-Number: 601-216-3 CAS-Number: 112945-52-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	4 mg/m ³	DNEL

PNEC-values:

Silica, amorphous, fumed, crystalline free EC-Number: 601-216-3 CAS-Number: 112945-52-5

Environmental compartment	Value
Secondary poisoning	60.000 mg/kg (food)

1,2-Benzisothiazol-3(2H)-one EC-Number: 220-120-9 CAS-Number: 2634-33-5

Environmental compartment	Value
Fresh water	0,00403 mg/l
Marine water	0,000403 mg/l
Intermittend use/release	0,0011 mg/l
Sewage treatment plant	1,03 mg/l
Fresh water sediment	0,0499 mg/kg dry weight (d.w.)
Marine sediment	0,00499 mg/kg dry weight (d.w.)
Soil	3 mg/kg dry weight (d.w.)

Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) EC-Number: 611-341-5

CAS-Number: 55965-84-9

Environmental compartment	Value	
Fresh water	0,049 µg/l	
Marine water	0,0098 µg/l	
Sewage treatment plant	0,045 µg/l	
Soil	0,009 µg/l	

8.2. Exposure controls

Appropriate engineering controls:

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

General protective measures:

Wear suitable protective equipment.

Respiratory protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection:

Nitrile rubber

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection:

Safety glasses

Body protection:

Wear suitable protective equipment.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

	Physical state:	liquid
	Form:	liquid
	Colour:	black
	Odour:	not significant
	Odour threshold:	not required
	pH value:	not measured
	Melting point:	not applicable
	Boiling point:	approx. 100 °C
	Flash point:	> 100 °C
	Evaporation rate:	not determined
	Flammability:	not determined
	Lower explosion limit:	not determined
	Upper explosive limit:	not determined
	Combustion number:	not applicable
	Minimum ignition energy:	not determined
	Vapour pressure:	not determined
	Vapour density relative to air:	not determined
	Relative Density:	no data available
	Solubility in water:	miscible
	Octanol/ water partition	
	coefficient (log Pow):	not determined
	Ignition temperature:	not determined
	Thermal decomposition:	> 100 °C
	Viscosity (dynamic):	not tested
	Oxidizing properties:	no data available
9.2.	Other information	
	Density:	1,20 g/cm³ (20 °C)

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical Stability

Stable under normal conditions.

- **10.3.** Possibility of hazardous reactions No dangerous reaction known under conditions of normal use. Stable.
- **10.4.** Conditions to avoid None known.
- **10.5.** Incompatible Materials No data available.
- **10.6. Hazardous decomposition products** No decomposition if stored and applied as directed.

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JECTION II. IUXICULUGIC INFURMATION	SECTION 11:	Toxicologic	INFORMATION
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11.1. Information on toxicological effects Acute toxicity

Acute toxicity	
Informations related to the product:	
Acute oral toxicity:	Remarks: no data available
Acute inhalation toxicity:	Remarks: no data available
Acute dermal toxicity:	Acute toxicity estimate:> 2.000 mg/kg Method: Calculation method
Informations related to the componer	<u> 1,2-Benzisothiazol-3(2H)-one:</u>
Acute oral toxicity:	LD50 (Rat, male and female): 670 - 784 mg/kg Method: OECD Test Guideline 401 GLP: yes
Acute inhalation toxicity:	LC50 (Rat, male and female): 0,5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OPPTS 870.1300 GLP: yes
Acute dermal toxicity:	LD50 (Rat, male and female): > 2.000 mg/kg GLP: yes
	Assessment: The substance or mixture has no acute dermal toxicity.
Informations related to the componer 2-methyl-2H-isothiazol-3-one (3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Acute oral toxicity:	LD50 (Rat): 64 mg/kg
Acute inhalation toxicity:	LC50 (Rat, male and female): 0,171 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity:	LD50 (Rabbit): 92,4 mg/kg
Skin corrosion/irritation	
Informations related to the product:	
Species:	Rabbit Method: OECD Test Guideline 404 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition.
Informations related to the componer Result:	t Alcohols, C16-18 and C18-unsaturated, ethoxylated: Irritating to skin.
Informations related to the componer	t 1.2-Benzisothiazol-3(2H)-one:
Species:	Rabbit Exposure time: 4 h Result: Irritating to skin. GLP: yes
Informations related to the componer 2-methyl-2H-isothiazol-3-one(3:1):	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Species:	Rabbit Result: Causes burns.
Serious eye damage/eye irritation	
Informations related to the product: Species:	rabbit eye Method: OECD Test Guideline 405 Result: No eye irritation Remarks: The toxicological data has been taken from products of similar composition.

Informations related to the componen	t 1,2-Benzisothiazol-3(2H)-one:
Species:	rabbit eye Exposure time: 2,9 h - 11 d Result: Risk of serious damage to eves.
	GLP: yes
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Species:	rabbit eye Result: Risk of serious damage to eyes.
Respiratory or skin sensitisation	
Informations related to the product: Remarks:	no data available
Informations related to the componen	t 1,2-Benzisothiazol-3(2H)-one:
Test Type:	Guinea pig maximization test Exposure routes: Dermal
Species:	Guinea pig
	ResulT: May cause sensitisation by skin contact.
	GLP: yes
Informations related to the componen methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-
Species:	Guinea pig
	Method: Other Result: The product is a skin sensitiser
	sub-category 1A.
	Assessment: Toxic if swallowed, Fatal in contact with skin,
	Fatal ifinhaled,
	Causes severe skin burns and eye damage. May cause an allergic skin reaction.
erm cell mutagenicity	
Informations related to the product:	
Genotoxicity in vitro: Germ cell mutagenicity-	Remarks: no data avaliable
Assessment:	No information available.
Informations related to the componen	t 1,2-Benzisothiazol-3(2H)-one:
Genotoxicity in vitro:	Test Type: Mouse lymphoma assay Test system: mouse lymphoma cells Concentration: 0.1 - 12.8 ug/ml
Metabolic activation: with and without metabolic	
activation:	Method: OECD Test Guideline 476 Result: negative
	GLP: yes
	Test Type: Ames test Test system: Salmonella typhimurium Concentration: 0,064 - 200 uɑ/ɒlate
Metabolic activation:	
with and without metabolic	Method: OECD Test Guideline 471
	Result: negative GLP: ves

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	Test Type: Chromosome aberration test in vitro Test system: Human lymphocytes Concentration: 1 - 40 ug/ml
Metabolic activation: with and without metabolic activation:	Method: OECD Test Guideline 473
	Result: positive GLP: yes
Genotoxicity in vivo:	Test Type: Other Species: Rat (male) Strain: wistar Cell type: Liver cells Application Route: Ingestion Exposure time: single dose Dose: 560 - 1400 mg/kg Method: OECD Test Guideline 486 Result: negative GLP: yes
	Test Type: Micronucleus test Species: Mouse (male and female) Strain: CD1 Cell type: Bone marrow Application Route: Ingestion Exposure time: single dose Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes
Germ cell mutagenicity- Assessment:	Did not show mutagenic effects in animal experiments.
Informations related to the componen	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Genotoxicity in vitro: Metabolic activation: with and without metabolic	Test Type: In vitro study
activation:	Result: Conflicting results have been seen in different studies.
Genotoxicity in vivo:	Test Type: Micronucleus test Species: Rat Cell type: Bone marrow Application Route: Oral Exposure time: ≤ 5 d Dose: 1-5 x ≤ 28 mg/kg Result: negative
	Test Type: Micronucleus test Species: Mouse Application Route: Oral Exposure time: ≤ 5 d Dose: 1-5 x ≤ 20 - 30 mg/kg Result: negative
Germ cell mutagenicity- Assessment:	In vivo tests did not show mutagenic effects

CULR[™] Art Pigment for Epoxy – Jet Black Tradename: page 10/21 Carcinogenicity Informations related to the product: Carcinogenicity -Assessment: No information available. Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Carcinogenicity -Assessment: Not applicable Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): Carcinogenicity -Assessment: No evidence of carcinogenicity in animal studies. **Reproductive toxicity** Informations related to the product: Reproductive toxicity -Assessment: No information available. Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Effects on fertility: Species: Rat, male Application Route: oral (fed) Dose: 18,5 - 97,8 mg/kg General Toxicity - Parent: NOAEL: 18,5 mg/kg body weight General Toxicity F1: NOAEL: 48 mg/kg body weight Method: Other GLP: yes Species: Rat, female Application Route: oral (feed) Dose: 27,0 - 114,8 mg/kg General Toxicity - Parent: NOAEL: 27 mg/kg body weight General Toxicity F1: NOAEL: 56,6 mg/kg body weight Method: Other GLP: yes Effects on foetal development: Species: Rat, female Application Route: oral (gavage) Dose: 10 - 40 - 100 mg/kg General Toxicity Maternal: NOAEL: 10 mg/kg body weight Teratogenicity: NOAEL: 40 mg/kg body weight Method: Directive 67/548/EEC, Annex V, B.31. GLP: yes Reproductive toxicity – Assessment: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments. Embryotoxicity classification not possible from current data. Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): Effects on fertility: Species: Rat, male and female Application Route: Drinking water Dose: 25 - 75 - 225 ppm General Toxicity - Parent: NOAEL: 16,3 - 24,7 mg/kg body weight General Toxicity F1: NOAEL: 16,3 - 24,7 mg/kg body weight

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	Method: Other GLP: yes
	Species: Rat, male and female Application Route: Drinking water Dose: 30 - 100 - 300 ppm General Toxicity - Parent: NOAEL: 2,8 - 4,4 mg/kg body weight
	General Toxicity F1: NOAEL: 22,7 - 28 mg/kg body weight
	General Toxicity F2: NOAEL: 35,7 - 39,1 mg/kg body weight Method: OECD Test Guideline 416 GLP: ves
Effects on foetal development:	Species: Rat, male and female Application Route: oral (gavage) Dose: ≤ 15 mg/kg
Developmental Toxicity:	NOAEL: 15 mg/kg body weight Method: Other
	Species: Rat, male and female Application Route: oral (gavage) General Toxicity Maternal: NOAEL: ≤ 3,95 mg/kg body weight Method: Other
Reproductive toxicity – Assessment:	Weight of evidence does not support classification for reproductive toxicity Embryotoxicity classification not possible from current data.
STOT - single exposure	
Informations related to the componen	t product:
Remarks:	no data available
Informations related to the componen	t 1,2-Benzisothiazol-3(2H)-one:
Assessment:	
	The substance or mixture is not classified as specific target organ toxicant, single exposure.
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1):	The substance or mixture is not classified as specific target organ toxicant, single exposure.
Informations related to the componen <u>2-methyl-2H-isothiazol-3-one(3:1):</u> Assessment:	The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure.
Informations related to the componen <u>2-methyl-2H-isothiazol-3-one(3:1):</u> Assessment: STOT - repeated exposure	 The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure.
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: STOT - repeated exposure Informations related to the componen Remarks:	 The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t product:</u> no data available
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: STOT - repeated exposure Informations related to the componen Remarks: Informations related to the componen	 The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t product:</u> no data available t 1.2-Benzisothiazol-3(2H)-one:
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: STOT - repeated exposure Informations related to the componen Remarks: Informations related to the componen Assessment:	 The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t product:</u> no data available <u>t 1,2-Benzisothiazol-3(2H)-one:</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: STOT - repeated exposure Informations related to the componen Remarks: Informations related to the componen Assessment:	 The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t product:</u> no data available <u>t 1,2-Benzisothiazol-3(2H)-one:</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u>
Informations related to the componen <u>2-methyl-2H-isothiazol-3-one(3:1):</u> Assessment: STOT - repeated exposure Informations related to the componen Remarks: Informations related to the componen Assessment: Informations related to the componen <u>2-methyl-2H-isothiazol-3-one(3:1):</u> Assessment:	The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t product:</u> no data available <u>t 1,2-Benzisothiazol-3(2H)-one:</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: STOT - repeated exposure Informations related to the componen Remarks: Informations related to the componen Assessment: Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: Repeated dose toxicity	The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t product:</u> no data available <u>t 1,2-Benzisothiazol-3(2H)-one:</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: STOT - repeated exposure Informations related to the componen Remarks: Informations related to the componen Assessment: Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: Repeated dose toxicity Informations related to the product:	The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t product:</u> no data available <u>t 1,2-Benzisothiazol-3(2H)-one:</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: STOT - repeated exposure Informations related to the componen Remarks: Informations related to the componen Assessment: Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: Repeated dose toxicity Informations related to the product: Remarks:	The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t product:</u> no data available <u>t 1,2-Benzisothiazol-3(2H)-one:</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: STOT - repeated exposure Informations related to the componen Remarks: Informations related to the componen Assessment: Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment: Repeated dose toxicity Informations related to the product: Remarks: Informations related to the componen	The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, single exposure. <u>t product:</u> no data available <u>t 1,2-Benzisothiazol-3(2H)-one:</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure. <u>t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

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LOAEL: 20 mg/kg Application Route: oral (gavage) Exposure time: 90 d Number of exposures: daily Dose: 5 - 20 - 50 mg/kg Group: yes Method: 88/302/EC GLP: yes

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Species:

Rat, male and female NOAEL: 16,3 - 24,7 mg/kg ApplicationRoute: Drinking water Exposure time: 90 d Number of exposures: daily Dose: 25 - 75 - 225 ppm Group: yes Method: Other GLP: yes

Aspiration toxicity

Informations related to the product: no data available

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

No aspiration toxicity classification

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): No aspiration toxicity classification

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Informations related to the product:	
Toxicity to fish:	Remarks: no data available
Toxicity to daphnia and other	
aquatic invertebrates:	Remarks: no data available
Toxicity to algae:	Remarks: no data available
Toxicity to fish (Chronic toxicity):	Remarks: no data available
Toxicity to microorganisms:	Remarks: no data available
Informations related to the componer	t Alcohols, C16-18 and C18-unsaturated, ethoxylated:
M-Factor	
(Acute aquatic toxicity):	1
Ecotoxicology Assessment	
Acute aquatic toxicity:	Very toxic to aquatic life.
Chronic aquatic toxicity:	Harmful to aquatic life with long lasting effects.
Informations related to the componer	<u>it 1,2-Benzisothiazol-3(2H)-one:</u>
Toxicity to fish :	LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l
	Exposure time: 96 h
	Test Type: static test
	Test Type: static test Analytical monitoring: yes Mathadi OCD Test Quideline 202
	Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203
	Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes
	Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes LC50 (Cyprinodon variegatus (sheepshead minnow)): approx.16,7 mg/l
	Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes LC50 (Cyprinodon variegatus (sheepshead minnow)): approx.16,7 mg/l Exposure time: 96 h

	-	
Tovici	by to dopphip and other	Test Type: static test Analytical monitoring: yes Method: No information available. GLP: yes
l oxici aqi	uatic invertebrates:	EC50 (Daphnia magna (Water flea)): 2,94 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
		EC0 (Daphnia magna (Water flea)): 0,643 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
		EC50 (Mysidopsis bahia (opossum shrimp)): 0,9893 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water
Toxici	ty to algae:	NOEC (Mysidopsis bahia (opossum shrimp)): 0,25 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water EC50 (Selenastrum capricornutum (green algae)): 0,155 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
		NOEC (Selenastrum capricornutum (green algae)): 0,055 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
M-Fac	tor	
(Ac	cute aquatic toxicity):	1
Toxici	ty to microorganisms:	 EC50 (activated sludge of a predominantly domestic sewage): 23 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Analytical monitoring: no Method: OECD Test Guideline 209 GLP: yes

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	Remarks: The details of the toxic effect relate nominal concentration.	to the	
	EC50: > 811,5 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate nominal concentration.	to the	
	NOEC: 263,7 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate nominal concentration.	to the	
Toxicity to fish			
(Chronic toxicity):	NOEC: 0,21 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout Analytical monitoring: yes Method: OECD Test Guideline 215 GLP: yes	t)	
Toxicity to daphnia and other aquatic invertebrates			
(Chronic toxicity):	NOEC: 1,2 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes		
	NOEC: 1,9 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes		
Toxicity to soil dwelling organisms:	Test Type: artificial soil LC50: > 410,6 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect relate nominal concentration. Test Type: artificial soil	to the	
	NOEC: 234,5 mg/kg Exposure time: 14 d		

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Plant t	oxicity:	End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect relate nominal concentration. EC50: 340 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate nominal concentration.	to the	
		NOEC: 90 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate nominal concentration.	to the	
		EC50: 300 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP: yes Remarks: The details of the toxic effect relate nominal concentration.	to the	
		NOEC: 51 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate nominal concentration.	to the	
Sedim Ecotox Acu Chi	ent toxicity: kicology Assessment ute aquatic toxicity: ronic aquatic toxicity:	Remarks: not available Very toxic to aquatic life. Toxic to aquatic life with long lasting effects		
Inform 2-meth	ations related to the componen nyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-	one a	<u>nd</u>
Toxicit	y to fish:	EC50 (Oncorhynchus mykiss (rainbow trout)) Exposure time: 96 h Method: OECD Test Guideline 203	: 0,22	mg/l
Toxicit aqı	y to daphnia and other latic invertebrates:	EC50 (Daphnia magna (Water flea)): 0,1 mg/l Exposure time: 48 h Method: OECD Test Guideline 202		

·····	- I - J
Toxicity to algae:	EC50 (Skeletonema costatum (marine diatom)): 0,0052 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 201
	NOEC (Skeletonema costatum (marine diatom)): 0,00049 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity): Toxicity to microorganisms:	100 EC50 (activated sludge): 7,92 mg/l Exposure time: 3 h Method: OECD Tast Guideline 200
Toxicity to fish (Chronic toxicity):	NOEC: 0,098 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Method: OECD Test Guideline 215
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0,004 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
M-Factor (Chronic aquatic toxicity): Toxicity to soil dwelling organisms:	10 LC50: 86,6 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207
	NOEC: 8,83 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) OECD Test Guideline 207
Ecotoxicology Assessment Acute aquatic toxicity: Chronic aquatic toxicity:	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
12.2. Persistence and degradability <u>Informations related to the product:</u> Biodegradability:	no data available
Informations related to the componen Biodegradability:	t 1,2-Benzisothiazol-3(2H)-one: Test Type: aerobic Inoculum: activated sludge Concentration: 1 mg/l Result: Partially biodegradable. Exposure time: 63 d Method: OECD Test Guideline 301C GLP: yes
Physico-chemical removability: Stability in water:	Remarks: Biodegradable Test Type: abiotic Degradation half life: 219 d

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	• • • · · · · · · · · · · · · · · · · ·
	pH: 4 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
	Test Type: abiotic Degradation half life: > 200 d pH: 7 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
Photodegradation:	Test Type: abiotic Degradation half life: 145 d pH: 9 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes Test Type: water Light source: Xenon lamp Light spectrum: 290 - 400 nm Degradation (direct photolysis): < 1,5 % GLP: yes
	Test Type: air Method: calculated GLP: no Remarks: Decomposes rapidly in contact with light.
Informations related to the component	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>2-methyl-2H-isothiazol-3-one(3:1):</u>	
Biodegradability:	I est Type: aerobic Inoculum: activated sludge Result: Not rapidly biodegradable Method: OECD Test Guideline 301B
Photodegradation:	Test Type: water Light source: Sunlight
12.3. Bioaccumulative potential	
Informations related to the product:	
Bioaccumulation:	no data available
Informations related to the component Bioaccumulation:	t 1,2-Benzisothiazol-3(2H)-one: Species: Lepomis macrochirus (Bluegill sunfish) Exposure time: 56 d Concentration: 0,1 mg/l Bioconcentration factor (BCF): 6,62 Method: OECD Test Guideline 305 GLP: no Remarks: Due to the distribution coefficient n-octanol/water,accumulation in organisms is not expected.
Informations related to the component	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>2-methyl-2H-isothiazol-3-one(3:1):</u>	Piecensentration factor (PCE): 2.6
	Method: calculated Remarks: Does not accumulate in organisms.
Partition coefficient	
n-octanol/water:	log Pow: -0,71 - 0,75 Method: OECD Test Guideline 107

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12.4.	.4. Mobility in soil Informations related to the component 1,2-Benzisothiazol-3(2H)-one:		
	Distribution among environmental compartments:	Adsorption/Soil Medium: water – soil Koc: 235 – 566 Method: Other	
12.5.	Results of PBT and vPvB assessmen Informations related to the product: This substance/mixture contains no c bioaccumulative and toxic (PBT), or v of 0,1 % or higher.	nt omponents considered to be either persistent, ery persistent and very bioaccumulative (vPvB) at levels	
	Assessment:	The substance is not identified as a PBT or as a vPvB substance.	
	Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Assessment:	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and This substance is not considered to be persistent, bioaccumulating and toxic (PBT).	
12.6.	Other adverse effects Informations related to the product: Environmental fate and pathways: Additional ecological information: Informations related to the component	no data available no data available <u>t 1,2-Benzisothiazol-3(2H)-one:</u>	
	Environmental fate andpathways: Additional ecological information:	not available Do not allow to enter ground water, waterways or waste water.	
	Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1): Additional ecological information:	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and The product should not be allowed to enter drains, watercourses or the soil.	

SECTION 13: DISPOSAL CONSIDERATIONS

- 13.1. Waste treatment methods
 - Product:

Dispose of in accordance with the European Directives on waste and hazardous waste.

Uncleaned packaging:

This material and its container must be disposed of in a safe way.

SECTION 14: TRANSPORT INFORMATION

14.1. to 14.5.

not restricted
not restricted
not restricted
not restricted
not restricted

- **14.6.** Special precautions for users See sections 6 to 8 of this Safety Data Sheet.
- **14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** No transport as bulk according IBC-Code.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of	
Very High Concern for Authorisation (Article 59):	Not applicable
REACH - List of substances subject to authorisation	
(Annex XIV):	Not applicable
Regulation (EC) No 1005/2009 on substances that	
deplete the ozone layer:	Not applicable
Regulation (EC) No 850/2004 on persistent	
organic pollutants:	Not applicable

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

15.2. Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

SECTION 16: OTHER INFORMATION

Observe the legal requirements nationally and locally.

List of the text of the hazard statements mentioned section 3 (H-phrases):

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.:	Acute toxicity
Aquatic Acute:	Short-term (acute) aquatic hazard
Aquatic Chronic:	Long-term (chronic) aquatic hazard
Eye Dam.:	Serious eye damage
Skin Corr.:	Skin corrosion
Skin Irrit.:	Skin irritation
Skin Sens.:	Skin sensitisation
STOT RE:	Specific target organ toxicity - repeated exposure

Change compared to the previous version:

Change in the composition

Legend

ADN	European Agreement concerning the International Carriage of
	Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of
	Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ASTM	American Society for the Testing of Materials
bw	Body weight

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	CLP	Classification Labelling Packaging Regulation		
		Regulation (EC) No 1272/2008		
	CMR	Carcinogen, Mutagen or Reproductive Toxicant		
	DIN	Standard of the German Institute for Standardisation		
	DMEL	Derived Minimal Effect Level (genotoxic substances)		
	DNEL	Derived No Effect Level		
	DSL	Domestic Substances List (Canada)		
	ECHA	European Chemicals Agency		
	EC-Number	European Community number		
	ECx	Concentration associated with x% response		
	ELx	Loading rate associated with x% response		
	EmS	Emergency Schedule		
	ENCS	Existing and New Chemical Substances (Japan)		
	ErCx	Concentration associated with x% growth rate response		
	GHS	Globally Harmonized System		
	GLP	Good Laboratory Practice		
	IARC	International Agency for Research on Cancer		
	IATA	International Air Transport Association		
	IBC	International Code for the Construction and Equipment of Ships		
		carrying Dangerous Chemicals in Bulk		
	IC50	Half maximal inhibitory concentration		
	ICAO	International Civil Aviation Organization		
	IECSC	Inventory of Existing Chemical Substances in China		
	IMDG	International Maritime Dangerous Goods		
	IMO	International Maritime Organization		
	ISHL	Industrial Safety and Health Law (Japan)		
	ISO	International Organisation for Standardization		
	KECI	Korea Existing Chemicals Inventory		
	LC50	Lethal Concentration to 50 % of a test population		
	LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)		
	MARPOL	International Convention for the Prevention of Pollution from Ships		
	n.o.s.	Not Otherwise Specified		
	NO(A)EC	No Observed (Adverse) Effect Concentration		
	NO(A)EL	No Observed (Adverse) Effect Level		
	NOELR	No Observable Effect Loading Rate		
	NZIOC	New Zealand Inventory of Chemicals		
	OECD	Organization for Economic Co-operation and Development		
	OPPIS	Office of Chemical Safety and Pollution Prevention		
	PBI	Persistent, Bioaccumulative and Toxic substance		
	PICCS	Philippines Inventory of Chemicals and Chemical Substances		
	(Q)SAR	(Quantitative) Structure Activity Relationship		
	REACH	Regulation (EC) No 1907/2006 of the European Parliament and of t	ne	
		Council concerning the Registration, Evaluation, Authorisation and		
		Restriction of Chemicals		
	RID	Regulations concerning the International Carriage of Dangerous Go	ods	
	SADT	Self-Accelerating Decomposition Temperature		
		Safaty Data Shaat		
		Taiwan Chemical Substance Inventory		
	TRCS	Tachnical Dule for Hazardous Substances		
	TSCA	Toxic Substances Control Act (United States)		
		Inited Nations		
		Vincu Nations		
	VEVD	very reisistent and very bloaccumulative		

Decimal notation: "thousands" places are identified with a dot (for example, "2.000 mg/kg" means "two thousand mg/kg"). Decimal places are identified with a comma (for example, "1,35 g/cm³" means "one point three five g/cm³").

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Easy Composites Ltd makes no warranties, express or implied, as to the information accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Easy Composites Ltd products for its particular application. Nothing included in this information waives any of Easy Composites Ltd 's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing.

Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Easy Composites Ltd products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products.

For additional information, please contact Easy Composites Ltd.

SAFETY DATA SHEET

in acc. with Regulation (EU) No. 2015/830



Tradename: CULR[™] Art Pigment for Epoxy – Super White

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SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier

Tradename:	CULR™ Art Pigment for Epoxy – Super White
Chemical	
characterisation:	C.I. Pigment Whitze 6 and Calciumcarbonat in aqueous dispersion,
	contenting Polyglykol and 1,2-Propandiol.

1.2. Relevant identified uses of the substance or mixture and uses advised again Relevant identified uses of the substance or mixture:

Industry sector: Industrial Performance Chemicals Paints, lacquers and varnishes industry Polymers industry Printing Inks Industry Type of use: Colourant preparation

1.3. Details of the supplier of the safety data sheet

Easy Composites Ltd Unit 39 Park Hall Business Village Stoke on Trent, ST3 5XA. United Kingdom. Phone: +44 (0)1782 454499

Information to substance / mixture: Division: Technical E-mail: technical@glasscastresin.com

1.4. Emergency telephone number

Emergency CONTACT (Office Hours) Phone: +44 (0)1782 454499

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance / mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Categoryof danger	Category HazardSymbol	H-Phrases

Not a hazardous substance or mixture.

2.2. Label elements

Labelling according CLP regulation (Regulation (EC) No. 1272/2008, as amended): Not a hazardous substance or mixture.

Additional Labelling:

EUH 208 contains mixture of:

1,2-Benzisothiazol-3(2H)-one, mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one

and 2-methyl-2H-isothiazol-3-one(3:1).

May produce an allergic reaction. Safety data sheet available on request.

EUH210:

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1 % or higher.

No hazards to be specially mentioned.

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SECTION 3: COMPOSITION / INFORMATION TO INGREDIENTS

3.1. Mixtures

Hazardous ingredients:

Alcohols, C16-18 and C18-unsaturated, ethoxylated (8 EO)

%

Concentration:	≥ 5,3 - ≤ 12,6
CAS-Number:	68920-66-1
EC-Number:	500-236-9

GHS classification EC:

Skin irritation	Category 2	H315
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 3	H412
M-Factor (Acute aquatic toxicity)		1

1,2-Benzisothiazolin-3-on

Concentration:	≥ 0,0025 - ≤ 0,025 %
CAS-Number:	2634-33-5
EC-Number:	220-120-9
INDEX-No.:	613-088-00-6
Registrationnumber:	01-2120761540-60

GHS classification EC:

Acute toxicity	Category 4	H302
Fatal ifinhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 2	H411

Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1) Concentration: $\geq 0,0002 - \leq 0,0015 \%$

Concentration: CAS-Number: EC-Number: INDEX-No.: Registrationnumber:

55965-84-9 611-341-5 613-167-005 01-2120764691-48

GHS classification EC:

Acute toxicity	Category 3	H301
Acute toxocity	Category 2	H310
Fatal ifinhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314
May cause an alergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category1	H410

The text of H-phrases is shown in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Discription of first aid measures

General information:

Get medical advice/ attention if you feel unwell.

After inhalation:

Move the victim to fresh air.

If you feel unwell, seek medical advice (show the label where possible).

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 After contact with skin:

 In case of contact with skin, clean with plenty of soap and water.

 After contact with eyes:

 In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

 After ingestion:

 If swallowed, seek medical advice immediately and show this container or label.

 4.2.

 Most important symptoms and effects, both acute and delayed symptoms

 Symptoms:

 None known.

 Hazards:

 None known.

4.3. Indication of any immediate medical attention and special treatment needed Treatment:

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

<u>Suitable extinguishing media:</u> Water spray jet Dry powder Carbon dioxide (CO₂) Alcohol resistant foam

Extinguishing media that must not be used for safety reasons: High volume water jet

5.2. Special hazards arising from the substance or mixture In case of fires, hazardous combustion gases are formed: Carbon oxides (CO_x) Nitrogen oxides (NO_x)

5.3. Advice for firefighters

<u>Special protective equipment for firefighting:</u> Use self-contained breathing apparatus.

<u>Further information:</u> Wear suitable protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1. Personal precautions, protective equipment and emergency procedures Wear suitable personal protective equipment.
- 6.2. Environment precautions The product should not be allowed to enter drains, water courses or the soil.
- 6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Treat recovered material as described in the section "Disposal considerations".
- 6.4. Reference to other sections <u>Additional information:</u> Information regarding safe handling, see chapter 7.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling:

When used and handled appropriately no special measures are needed.

Hygiene measures:

Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

<u>Further information on storage conditions:</u> Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Keep away from flames and sparks.

<u>Storage stability:</u> Minimum 36 months.

7.3. Specific end use(s)

No further recommendations.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

<u>Exposure limit values:</u> Exposure limit values are not available.

DNEL / DMEL-values: C.I. Pigment White 6 EC-Number: 236-675-5 CAS-Number: 13463-67-7

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	10 mg/m ³	DNEL
Oral	Consumers	Long-term systemic effects	700 mg/kg bw/day	DNEL

1,2-Benzisothiazol-3(2H)-one

EC-Number: 220-120-9

CAS-Number: 2634-33-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	6,81 mg/m ³	DNEL
Dermal	Workers	Long-term systemic effects	0,966 mg/kg bw/day	DNEL
Inhalation	Consumers	Long-term systemic effects	1,2 mg/m ³	DNEL
Dermal	Consumers	Long-term systemic effects	0,345 mg/kg bw/day	DNEL

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Amorphous sili	con dioxide
EC-Number:	231-545-4

CAS-Number: 7631-86-9

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	4 mg/m ³	DNEL

Propylene Glycol

EC-Number: 200-338-0 CAS-Number: 57-55-6

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	168 mg/m ³	DNEL
Inhalation	Workers	Long-term local effects	10 mg/m ³	DNEL
Inhalation	Consumers	Long-term systemic effects	50 mg/m ³	DNEL
Inhalation	Consumers	Long-term local effects	10 mg/m ³	DNEL
Skin contact	Consumers	Long-term systemic effects	213 mg/m ³	
Ingestion	Consumers	Long-term systemic effects	85 mg/m ³	

PNEC-values:

C.I. Pigment White 6 EC-Number: 236-675-5 CAS-Number: 13463-67-7

Environmental compartment	Value
Fresh water	0,184 mg/l
Fresh water sediment	1000 mg/kg dry weight (d.w.)
Marine water	0,0184 mg/l
Marine sediment	100 mg/kg dry weight (d.w.)
Soil	100 mg/kg dry weight (d.w.)
Sewage treatment plant	100 mg/l
Water (intermittent release)	0,193 mg/l

Propylene Glycol EC-Number: 200-338-0 CAS-Number: 57-55-6

Environmental compartment	Value
Fresh water	260 mg/l
Marine water	26 mg/l
Water (intermittent release)	183 mg/l
Sewage treatment plant	20000 mg/l
Fresh water sediment	572 mg/kg dry weight (d.w.)
Marine sediment	57,2 mg/kg dry weight (d.w.)
Soil	50 mg/kg dry weight (d.w.)

1,2-Benzisothiazol-3(2H)-one EC-Number: 220-120-9 CAS-Number: 2634-33-5

Environmental compartment	Value
Fresh water	0,00403 mg/l
Marine water	0,000403 mg/l
Intermittend use/release	0,0011 mg/l

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Sewage treatment plant	1,03 mg/l
Fresh water sediment	0,0499 mg/kg dry weight (d.w.)
Marine sediment	0,00499 mg/kg dry weight (d.w.)
Soil	3 mg/kg dry weight (d.w.)

Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) EC-Number: 611-341-5 CAS-Number: 55965-84-9

Environmental compartment	Value	
Fresh water	0,049 µg/l	
Marine water	0,0098 µg/l	
Sewage treatment plant	0,045 µg/l	
Soil	0,009 µg/l	

8.2. Exposure controls

Appropriate engineering controls:

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

General protective measures:

Wear suitable protective equipment.

Respiratory protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection:

Nitrile rubber

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection:

Safety glasses

<u>Body protection:</u> Wear suitable protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Form:	liquid
Colour:	white
Odour:	not significant
Odour threshold:	not required
pH value:	not measured
Melting point:	not applicable
Boiling point:	approx. 100 °C
Flash point:	> 100 °C
Evaporation rate:	not determined
Flammability:	not determined
Lower explosion limit:	not determined
Upper explosive limit:	not determined
Combustion number:	not applicable
Minimum ignition energy:	not determined
Vapour pressure:	not determined
Vapour density relative to air:	not determined
Relative Density:	no data available
Solubility in water:	miscible
Octanol/ water partition	
coefficient (log Pow):	not determined
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	Ignition temperature: Thermal decomposition: Viscosity (dynamic): Oxidizing properties:	not determined > 100 °C not tested no data available
9.2.	Other information Density:	1,80 g/cm³ (20 °C)

SECTION 10: STABILITY AND REACTIVITY

10.1.	Reactivity
	No dangerous reaction known under conditions of normal use.
10.2.	Chemical Stability
	Stable under normal conditions.
10.3.	Possibility of hazardous reactions
	No dangerous reaction known under conditions of normal use. Stable.
10.4.	Conditions to avoid
	None known.
10.5.	Incompatible Materials
	No data available.
10.6.	Hazardous decomposition products
	No decomposition if stored and applied as directed.

SECTION 11: TOXICOLOGIC INFORMATION

11.1. Information on toxicological effects

Acute toxicity	
Informations related to the product:	
Acute oral toxicity:	Remarks: no data available
Acute inhalation toxicity:	Remarks: no data available
Acute dermal toxicity:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method
Informations related to the component	t 1,2-Benzisothiazol-3(2H)-one:
Acute oral toxicity:	LD50 (Rat, male and female): 670 - 784 mg/kg Method: OECD Test Guideline 401 GLP: yes
Acute inhalation toxicity:	LC50 (Rat, male and female): 0,5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OPPTS 870.1300 GLP: yes
Acute dermal toxicity:	LD50 (Rat, male and female): > 2.000 mg/kg GLP: yes Assessment: The substance or mixture has no acute dermal toxicity.
Informations related to the component 2-methyl-2H-isothiazol-3-one (3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Acute oral toxicity:	LD50 (Rat): 64 mg/kg
Acute inhalation toxicity:	LC50 (Rat, male and female): 0,171 mg/l
-	Exposure time: 4 h
	Test atmosphere: dust/mist

Acute dermal toxicity:

LD50 (Rabbit): 92,4 mg/kg

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Skin corrosion/irritation		
Informations related to the product:		
Species:	EPISKIN Human Skin Model Test Method: OECD Test Guideline 439 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition.	
Species:	Rabbit Method: OECD Test Guideline 404 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition.	
Informations related to the component Result:	t Alcohols, C16-18 and C18-unsaturated, ethoxylated: Irritating to skin.	
Informations related to the component Species:	<u>Rabbit</u> Rabbit Exposure time: 4 h Result:Irritating to skin. GLP:yes	
Informations related to the component	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and	
Species:	Rabbit Result:Causes burns.	
Serious eye damage/eye irritation		
Informations related to the product:		
Species:	Bovine cornea Method: OECD Test Guideline 437 Result: No eye irritation Remarks: The toxicological data has been taken from products of similar composition.	
Species:	rabbit eye Method: OECD Test Guideline 405 Result: No eye irritation Remarks: The toxicological data has been taken from products of similar composition.	
Informations related to the component	t 1,2-Benzisothiazol-3(2H)-one:	
Species:	rabbit eye Exposure time: 2,9 h - 11 d Result:Risk of serious damage to eyes. GLP: yes	
Informations related to the component 2-methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and	
Species:	rabbit eye Result: Risk of serious damage to eyes.	
Respiratory or skin sensitisation		
Informations related to the product:		
Remarks:	no data available	
Informations related to the component 1,2-Benzisothiazol-3(2H)-one:		
Test Type:	Guinea pig maximization test Exposure routes: Dermal	
Species:	Guinea pig Method: Other	

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	ResulT: May cause sensitisation by skin contact. GLP: yes
Informations related to the componer	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-
methyl-2H-isothiazol-3-one(3:1):	
Species:	Guinea pig
	Method: Other
	Result: The product is a skin sensitiser,
	sub-category 1A.
	Fatal in contact with skin
	Fatal ifinhaled,
	Causes severe skin burns and eye damage.
	May cause an allergic skin reaction.
Germ cell mutagenicity	
Informations related to the product:	
Genotoxicity in vitro:	Remarks: no data available
Germ cell mutagenicity-	
Assessment:	No information available.
Informations related to the componer	<u>at 1,2-Benzisothiazol-3(2H)-one:</u>
Genotoxicity in vitro:	Test Type: Mouse lymphoma assay
	Concentration: 0.1 - 12.8 µg/ml
Metabolic activation:	
with and without metabolic	
activation:	Method: OECD Test Guideline 476
	Result: negative
	GLP. yes Test Type: Ames test
	Test system: Salmonella typhimurium
	Concentration: 0,064 - 200 µg/plate
Metabolic activation:	
with and without metabolic	Mathady OECD Tast Cuidaling 471
	Result: negative
	GLP: ves
	Test Type: Chromosome aberration test in vitro
	Test system: Human lymphocytes
Matabalia activation	Concentration: 1 - 40 µg/ml
with and without metabolic	
activation:	Method: OECD Test Guideline 473
	Result: positive
	GLP: yes
Genotoxicity in vivo:	Test Type: Other
	Species. Rai (male) Strain: wistar
	Cell type: Liver cells
	Application Route: Ingestion
	Exposure time: single dose
	Dose: 560 - 1400 mg/kg Mothod: OECD Tost Guideline 486
	Result: negative
	GLP: yes
	Test Type: Micronucleus test
	Species: Mouse (male and female)
	Strain: CD1

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	Cell type: Bone marrow Application Route: Ingestion Exposure time: single dose Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes
Germ cell mutagenicity- Assessment:	Did not show mutagenic effects in animal experiments.
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Genotoxicity in vitro: Metabolic activation: with and without metabolic	Test Type: In vitro study
activation:	Result: Conflicting results have been seen in different studies.
Genotoxicity in vivo:	Test Type: Micronucleus test Species: Rat Cell type: Bone marrow Application Route: Oral Exposure time: $\leq 5 d$ Dose: 1-5 x $\leq 28 mg/kg$ Result: negative
	Test Type: Micronucleus test Species: Mouse Application Route: Oral Exposure time: $\leq 5 \text{ d}$ Dose: 1-5 x $\leq 20 - 30 \text{ mg/kg}$ Result: negative
Germ cell mutagenicity- Assessment:	In vivo tests did not show mutagenic effects
Carcinogenicity	
Informations related to the product: Carcinogenicity -	
Assessment:	No information available.
Informations related to the componen	it 1,2-Benzisothiazol-3(2H)-one:
Assessment:	Not applicable
<u>Informations related to the componen</u> <u>2-methyl-2H-isothiazol-3-one(3:1):</u> Carcinogenicity - Assessment:	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and No evidence of carcinogenicity in animal studies.
Reproductive toxicity <u>Informations related to the product:</u> Reproductive toxicity -	
Assessment:	No information available.
Informations related to the componen Effects on fertility:	<u>at 1,2-Benzisothiazol-3(2H)-one:</u> Species: Rat, male Application Route: oral (fed) Dose: 18,5 - 97,8 mg/kg General Toxicity - Parent: NOAEL: 18,5 mg/kg body weight General Toxicity F1: NOAEL: 48 mg/kg body weight

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	Method: Other GLP: yes
	Species: Rat, female Application Route: oral (feed) Dose: 27,0 - 114,8 mg/kg General Toxicity - Parent: NOAEL: 27 mg/kg body weight
	General Toxicity F1: NOAEL: 56,6 mg/kg body weight Method: Other GLP: yes
Effects on foetal development:	Species: Rat, female Application Route: oral (gavage) Dose: 10 - 40 - 100 mg/kg General Toxicity Maternal: NOAEL: 10 mg/kg
	body weight Teratogenicity: NOAEL: 40 mg/kg body weight Method: Directive 67/548/EEC, Annex V, B.31. GLP: yes
Reproductive toxicity – Assessment:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.
	data.
Informations related to the componer	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>2-metnyl-2H-isotniazol-3-one(3:1):</u>	Spacing: Bot male and famale
Effects of fertility.	Application Route: Drinking water
	Dose: 25 - 75 - 225 ppm
	General Toxicity - Parent: NOAEL: 16,3 - 24,7 mg/kg
	body weight
	body weight
	Method: Other
	GLP: yes
	Species: Rat, male and female
	Application Route: Drinking water
	Dose: 30 - 100 - 300 ppm General Toxicity - Parent: NOAEL: 2.8 - 4.4 mg/kg
	body weight
	General Toxicity F1: NOAEL: 22,7 - 28 mg/kg body weight
	General Toxicity F2: NOAEL: 35,7 - 39,1 mg/kg
	Method: OECD Test Guideline 416
Effects on foetal development:	Species: Rat. male and female
	Application Route: oral (gavage)
Developmental Toxicity:	NOAEL: 15 mg/kg body weight
	Method: Other
	Species: Rat, male and temale
	General Toxicity Maternal: NOAEL: < 3.95 ma/ka
	body weight
_	Method: Other
Reproductive toxicity – Assessment:	Weight of evidence does not support classification for reproductive toxicity

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	Embryotoxicity classification not possible from current data.
STOT - single exposure	
Informations related to the component	product:
Remarks:	no data available
Informations related to the component	1,2-Benzisothiazol-3(2H)-one:
Assessment:	The substance or mixture is not classified as specific target organ toxicant, single exposure.
Informations related to the component 2-methyl-2H-isothiazol-3-one(3:1):	mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Assessment:	The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	
Informations related to the component	product:
Remarks:	no data available
Informations related to the component	1,2-Benzisothiazol-3(2H)-one:
Assessment:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Informations related to the component 2-methyl-2H-isothiazol-3-one(3:1):	mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Assessment:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity	
Informations related to the product:	
Remarks:	This information is not available.
Informations related to the component	1,2-Benzisothiazol-3(2H)-one:
Species:	Dog, male and female
	NOAEL: 5 mg/kg
	Application Route: oral (gavage)
	Exposure time: 90 d
	Number of exposures: daily
	Dose: 5 - 20 - 50 mg/kg
	Group: yes Method: 88/302/EC
	GLP: ves
Informations related to the component	mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
2-methyl-2H-isothiazol-3-one(3:1):	
Species:	Rat, male and female
	NOAEL: 16,3 - 24,7 mg/kg
	ApplicationRoute: Drinking water
	Exposure time: 90 d
	Dose: $25 - 75 - 225$ npm
	Group: yes
	Method: Other GLP: yes
Aspiration toxicity	
Informations related to the product:	
no data available	

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Informations related to the component 1,2-Benzisothiazol-3(2H)-one: No aspiration toxicity classification Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): No aspiration toxicity classification

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Informations related to the product:	
Toxicity to fish:	Remarks: no data available
Toxicity to daphnia and other	
aquatic invertebrates:	Remarks: no data available
I OXICITY to algae:	Remarks: no data available
Toxicity to microorganisms:	Remarks: no data available
Informations related to the componen	t Alcohols, C16-18 and C18-unsaturated, ethoxylated:
(Acute aquatic toxicity):	1
Ecotoxicology Assessment	1
Acute aquatic toxicity:	Very toxic to aquatic life.
Chronic aquatic toxicity:	Harmful to aquatic life with long lasting effects.
Informations related to the componen	t 1.2-Benzisothiazol-3(2H)-one:
Toxicity to fish :	LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l
	Exposure time: 96 h
	Test Type: static test
	Analytical monitoring: yes
	GLP: ves
	approx 16.7 mg/l
	Exposure time: 96 h
	Test Type: static test
	Analytical monitoring: yes
	Method: No information available.
The state of the last state and state an	GLP: yes
I OXICITY to daphnia and other	EC50 (Danhnia magna (Water flea)): 2.94 mg/l
aqualle invertebrates.	Exposure time: 48 h
	Test Type: static test
	Analytical monitoring: yes
	Method: OECD Test Guideline 202
	GLP: yes
	EC0 (Daphnia magna (Water flea)): 0,643 mg/l
	Exposure time: 48 h
	Lest Type: static test
	Method: OFCD Test Guideline 202
	GLP: yes
	- FC50 (Mysidonsis bahia (opossum shrimp)): 0 0803 mg/l
	Exposure time: 96 h
	Test Type: static test
	Analytical monitoring: yes
	Method: Other

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	GLP: yes Remarks: salt water
	NOEC (Mysidopsis bahia (opossum shrimp)): 0,25 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes
Toxicity to algae:	Remarks: salt water EC50 (Selenastrumc apricornutum (green algae)): 0,155 mg/l
	End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201
	GLP: yes NOEC (Selenastrum capricornutum (green algae)): 0,055 mg/l
	End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201
M-Factor	GLP: yes
(Acute aquatic toxicity):	1
Toxicity to microorganisms:	 EC50 (activated sludge of a predominantly domestic sewage): 23 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Analytical monitoring: no Method: OECD Test Guideline 209 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
	EC50: > 811,5 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
	NOEC: 263,7 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to fish	
(Chronic toxicity):	NOEC: 0,21 mg/l

Exposure time: 28 d

-	
Tovicity to danknip and other	Species: Oncorhynchus mykiss (rainbow trout) Analytical monitoring: yes Method: OECD Test Guideline 215 GLP: yes
aquatic invertebrates (Chronic toxicity):	NOEC: 1,2 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes
	NOEC: 1,9 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes
Toxicity to soil dwelling organisms:	Test Type: artificial soil LC50: > 410,6 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
	Test Type: artificial soil NOEC: 234,5 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration
Plant toxicity:	EC50: 340 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
	NOEC: 90 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes

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	Remarks: The details of the toxic effect r nominal concentration.	elate to the	
	EC50: 300 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP: yes Remarks: The details of the toxic effect r nominal concentration.	elate to the	
	NOEC: 51 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect r nominal concentration.	relate to the	
Sediment toxicity: Ecotoxicology Assessment Acute aquatic toxicity: Chronic aquatic toxicity:	Remarks: not available Very toxic to aquatic life. Toxic to aquatic life with long lasting effe	ects.	
Informations related to the compon	Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and		
<u>2-methyl-2H-isothiazol-3-one(3:1):</u> Toxicity to fish:	EC50 (Oncorhynchus mykiss (rainbow tr Exposure time: 96 h Method: OECD Test Guideline 203	out)): 0,22 mg/l	
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 0,1 Exposure time: 48 h	mg/l	
Toxicity to algae:	Method: OECD Test Guideline 202 EC50 (Skeletonema costatum (marine d 0,0052 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 201	iatom)):	
	NOEC (Skeletonema costatum (marine o 0,00049 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 201	diatom)):	
M-Factor (Acute aquatic toxicity): Toxicity to microorganisms:	100 EC50 (activated sludge): 7,92 mg/l Exposure time: 3 h Method: OECD Test Guideline 209		
Toxicity to fish (Chronic toxicity):	NOEC: 0,098 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow Method: OECD Test Guideline 215	<i>ı</i> trout)	

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	Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0,004 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Mathad: OECD Tast Quideling 202
	M Easter	Method: OECD Test Guideline 202
	(Chronic aquatic toxicity): Toxicity to soil dwelling	10
	organisms:	LC50: 86,6 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207
		NOEC: 8,83 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) OECD Test Guideline 207
	Ecotoxicology Assessment Acute aquatic toxicity: Chronic aquatic toxicity:	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
12.2.	Persistence and degradability Informations related to the product:	na data availabla
	Biodegradability:	no data avallable
	Informations related to the componer Biodegradability:	Test Type: aerobic Inoculum: activated sludge Concentration: 1 mg/l Result: Partially biodegradable. Exposure time: 63 d Method: OECD Test Guideline 301C GLP: yes
	Physico-chemical removability: Stability in water:	Remarks: Biodegradable Test Type: abiotic Degradation half life: 219 d pH: 4 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
		Test Type: abiotic Degradation half life: > 200 d pH: 7 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
	Photodegradation:	Test Type: abiotic Degradation half life: 145 d pH: 9 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes Test Type: water Light source: Xenon lamp Light spectrum: 290 - 400 nm Degradation (direct photolysis): < 1,5 % GLP: yes

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	Test Type: air Method: calculated GLP: no Remarks: Decompos	ses rapidly in contact with	light.
Informations related to the cor	nponent mixture of: 5-chloro-2	2-methyl-2H-isothiazol-3-	one and
<u>2-methyl-2H-isothiazol-3-one(</u> Biodegradability:	3:1): Test Type: aerobic Inoculum: activated s Result: Not rapidly bi Method: OECD Test	sludge odegradable Guideline 301B	
Photodegradation:	Test Type: water Light source: Sunligh	It	
12.3. Bioaccumulative potential Informations related to the pro Bioaccumulation:	<u>duct:</u> no data available		
Informations related to the cor Bioaccumulation:	nponent 1,2-Benzisothiazol-3 Species: Lepomis ma Exposure time: 56 d Concentration: 0,1 m Bioconcentration fact Method: OECD Test GLP: no Remarks: Due to the n-octanol/water,ac not expected.	(<u>2H)-one:</u> acrochirus (Bluegill sunfis g/l tor (BCF): 6,62 Guideline 305 distribution coefficient ccumulation in organisms	⊧h) s is
Informations related to the cor	nponent mixture of: 5-chloro-2	<u>2-methyl-2H-isothiazol-3-</u>	one and
<u>2-methyl-2H-isothiazol-3-one(</u> Bioaccumulation:	<u>3:1):</u> Bioconcentration fact Method: calculated Remarks: Does not a	tor (BCF): 3,6 accumulate in organisms.	
Partition coefficient			
n-octanol/water:	log Pow: -0,71 - 0,75 Method: OECD Test	Guideline 107	
12.4. Mobility in soil Informations related to the cor	nponent 1,2-Benzisothiazol-3	(2H)-one:	
Distribution among environmental compartmer	nts: Adsorption/Soil Medium: water – soil Koc: 235 – 566 Method: Other		
12.5. Results of PBT and vPvB asso Informations related to the pro This substance/mixture contain bioaccumulative and toxic (PB of 0,1 % or higher.	essment <u>duct:</u> ns no components considered T), or very persistent and ver	d to be either persistent, y bioaccumulative (vPvB)) at levels
Informations related to the cor	nponent 1,2-Benzisothiazol-3	<u>(2H)-one:</u>	
Assessment:	The substance is not substance.	identified as a PBT or as	₃a vPvB
Informations related to the cor 2-methyl-2H-isothiazol-3-one(3	nponent mixture of: 5-chloro-2 3:1):	2-methyl-2H-isothiazol-3-	<u>one and</u>

Assessment:

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

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12.6. Other adverse effects

Informations related to the product:		
Environmental fate and pathways:	no data available	
Additional ecological information:	no data available	
Informations related to the component 1,2-Benzisothiazol-3(2H)-one:		
Environmental fate andpathways:	not available	
Additional ecological information:	Do not allow to enter ground water, waterways or waste water.	
Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and		
<u>2-methyl-2H-isothiazol-3-one(3:1):</u>		
Additional ecological information:	The product should not be allowed to enter drains, watercourses or the soil.	

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product:

Dispose of in accordance with the European Directives on waste and hazardous waste.

Uncleaned packaging:

This material and its container must be disposed of in a safe way.

SECTION 14: TRANSPORT INFORMATION

14.1. to 14.5.

ADR:	not restricted
ADN:	not restricted
RID:	not restricted
IATA:	not restricted
IMDG:	not restricted

14.6. Special precautions for users

See sections 6 to 8 of this Safety Data Sheet.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No transport as bulk according IBC-Code.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of	
Very High Concern for Authorisation (Article 59):	Not applicable
REACH - List of substances subject to authorisation	
(Annex XIV):	Not applicable
Regulation (EC) No 1005/2009 on substances that	
deplete the ozone layer:	Not applicable
Regulation (EC) No 850/2004 on persistent	
organic pollutants:	Not applicable

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

15.2. Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

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SECTION 16: OTHER INFORMATION

Observe the legal requirements nationally and locally.

List of the text of the hazard statements mentioned section 3 (H-phrases):

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.:	Acute toxicity
Aquatic Acute:	Short-term (acute) aquatic hazard
Aquatic Chronic:	Long-term (chronic) aquatic hazard
Eye Dam.:	Serious eye damage
Skin Corr.:	Skin corrosion
Skin Irrit.:	Skin irritation
Skin Sens.:	Skin sensitisation
STOT RE:	Specific target organ toxicity - repeated exposure

Change compared to the previous version:

Change in the composition

Legend

European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
European Agreement concerning the International Carriage of Dangerous Goods by Road
Australian Inventory of Chemical Substances
American Society for the Testing of Materials
Body weight
Classification Labelling Packaging Regulation
Regulation (EC) No 1272/2008
Carcinogen, Mutagen or Reproductive Toxicant
Standard of the German Institute for Standardisation
Derived Minimal Effect Level (genotoxic substances)
Derived No Effect Level
Domestic Substances List (Canada)
European Chemicals Agency
European Community number
Concentration associated with x% response
Loading rate associated with x% response
Emergency Schedule
Existing and New Chemical Substances (Japan)
Concentration associated with x% growth rate response
Globally Harmonized System
Good Laboratory Practice
International Agency for Research on Cancer
International Air Transport Association
International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
Half maximal inhibitory concentration
International Civil Aviation Organization

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iradename.	page 21/1
IECSC	Inventory of Existing Chemical Substances in China
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISHL	Industrial Safety and Health Law (Japan)
ISO	International Organisation for Standardization
KECI	Korea Existing Chemicals Inventory
LC50	Lethal Concentration to 50 % of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	International Convention for the Prevention of Pollution from Ships
n.o.s.	Not Otherwise Specified
NO(A)EC	No Observed (Adverse) Effect Concentration
NO(A)EL	No Observed (Adverse) Effect Level
NOELR	No Observable Effect Loading Rate
NZIoC	New Zealand Inventory of Chemicals
OECD	Organization for Economic Co-operation and Development
OPPTS	Office of Chemical Safety and Pollution Prevention
PBI	Persistent, Bioaccumulative and Toxic substance
PICCS	Philippines Inventory of Chemicals and Chemical Substances
(Q)SAR	(Quantitative) Structure Activity Relationship
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the
	Council concerning the Registration, Evaluation, Authonsation and
חום	Resulction of Chemicals Regulations concerning the International Carriage of Dangerous Coods
RID	by Rail
SADT	by Nall Self-Accelerating Decomposition Temperature
SDS	Safety Data Sheet
TCSI	Taiwan Chemical Substance Inventory
TRGS	Technical Rule for Hazardous Substances
TSCA	Toxic Substances Control Act (United States)
UN	United Nations
vPvB	Very Persistent and Very Bioaccumulative
	, , ,

Decimal notation: "thousands" places are identified with a dot (for example, "2.000 mg/kg" means "two thousand mg/kg"). Decimal places are identified with a comma (for example, "1,35 g/cm³" means "one point three five g/cm³").

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Easy Composites Ltd makes no warranties, express or implied, as to the information accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Easy Composites Ltd products for its particular application. Nothing included in this information waives any of Easy Composites Ltd General Terms and Conditions of Sale, which control unless it agrees otherwise in writing.

Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Easy Composites Ltd products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products.

For additional information, please contact Easy Composites Ltd.

Tradename: CULR[™] Art Pigment for Epoxy – Super White

SAFETY DATA SHEET

in acc. with Regulation (EU) No. 2015/830



Tradename: CULR[™] Art Pigment for Epoxy – Tomato Red

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SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier Tradename: CULR™ Art Pigment for Epoxy – Tomato Red Chemical C.I. Pigment Red 254, Yellow 74 and Calciumcarbonat in aqueous characterisation: dispersion, contenting Polyglykol and 1,2-Propandiol. 1.2. Relevant identified uses of the substance or mixture and uses advised again Relevant identified uses of the substance or mixture: Industry sector: Industrial Performance Chemicals Paints, lacquers and varnishes industry Polymers industry Printing Inks Industry

Type of use: Colourant preparation

1.3. Details of the supplier of the safety data sheet

Identification of the company: Easy Composites Ltd Unit 39 Park Hall Business Village Stoke on Trent, ST3 5XA. United Kingdom. Phone: +44 (0)1782 454499

Information to substance / mixture:

Division: Technical

E-mail: <u>technical@glasscastresin.com</u>

1.4. Emergency telephone number

Emergency CONTACT (Office Hours) Phone: +44 (0)1782 454499

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance / mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Category of danger	Category Hazard Symbol	H-Phrases
Skin sensitisation, Category 1	Warning	H317

2.2. Label elements

Labelling according CLP regulation (Regulation (EC) No. 1272/2008, as amended): Hazard pictograms:

<pre></pre>	!>	
Signal word:	Warning	
Hazard statements:	H317	May cause an allergic skin reaction.
Precautionary statements:	Prevention: P261 P272 P280	Avoid breathing mist. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/ eye protection/ face protection.
	Response: P302 + P352	If on skin: Wash with plenty of water.

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P333 + P313		If skin irritation or rash occurs:
		Get medical advice/ attention.
P363	Wash	contaminated clothing before reuse

P363 Wash contaminated clothing before reuse.

Disposal: P501

Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label: 2-Methylisothiazolin-3-one

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION / INFORMATION TO INGREDIENTS

3.1. Mixtures

Hazardous ingredients:

Alcohols, C16-18 and C18-unsaturated, ethoxylated (8 EO)

Concentration:	≥ 3,5 - ≤ 11,5 %
CAS-Number:	68920-66-1
EC-Number:	500-236-9

GHS classification EC:

Skin irritation	Category 2	H315
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 3	H412
M-Factor (Acute aquatic toxicity)		1

1 2-Benzisothiazolin-3-on

1, 2-D 6112130t111a201111-	0-011
Concentration:	≥ 0,0025 - ≤ 0,025 %
CAS-Number:	2634-33-5
EC-Number:	220-120-9
INDEX-No.:	613-088-00-6
Registrationnumber:	01-2120761540-60

GHS classification EC:

Acute toxicity	Category 4	H302
Fatal ifinhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 2	H411

Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1)

Concentration:	≥ 0,0002 - ≤ 0,0015 %
CAS-Number:	55965-84-9
EC-Number:	611-341-5
INDEX-No.:	613-167-005
Registrationnumber:	01-2120764691-48

GHS classification EC:

Acute toxicity	Category 3	H301
Acute toxocity	Category 2	H310
Fatal ifinhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314

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May cause an alergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category1	H410

2-Methyl-4-isothiazolin-3-one

Concentration:	≥ 0,0015 - ≤ 0,025 %
CAS-Number:	2682-20-4
EC-Number:	220-239-6

GHS classification EC:

Toxic if swallowed	Category 3	H301
Fatal if inhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 2	H411

The text of H-phrases is shown in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Discription of first aid measures

General information:

Get medical advice/ attention if you feel unwell.

After inhalation:

Move the victim to fresh air.

If you feel unwell, seek medical advice (show the label where possible).

After contact with skin:

In case of contact with skin, clean with plenty of soap and water.

After contact with eyes:

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion:

If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed symptoms

Symptoms: None known.

<u>Hazards:</u>

None known.

4.3. Indication of any immediate medical attention and special treatment needed <u>Treatment:</u>

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray jet Dry powder Carbon dioxide (CO₂) Alcohol resistant foam

Extinguishing media that must not be used for safety reasons: High volume water jet

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5.2. Special hazards arising from the substance or mixture

In case of fires, hazardous combustion gases are formed: Carbon oxides (CO_x) Nitrogen oxides (NO_x)

5.3. Advice for firefighters <u>Special protective equipment for firefighting:</u> Use self-contained breathing apparatus.

<u>Further information:</u> Wear suitable protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1. Personal precautions, protective equipment and emergency procedures Wear suitable personal protective equipment.
- **6.2.** Environment precautions The product should not be allowed to enter drains, water courses or the soil.
- 6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Treat recovered material as described in the section "Disposal considerations".

I reat recovered material as described in the section "Disposal considerations"

6.4. Reference to other sections
<u>Additional information:</u>
Information regarding safe handling, see chapter 7.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

<u>Advice on safe handling:</u> When used and handled appropriately no special measures are needed.

Hygiene measures:

Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Keep away from flames and sparks.

Storage stability: Minimum 36 months.

7.3. Specific end use(s)

No further recommendations.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values: Exposure limit values are not available.

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DNEL / DMEL-values: C.I. Pigment Red 254 EC-Number: 402-400-4, 401-540-3 CAS-Number: 84632-65-5

Route of exposure	End use	Potential health effects	Value	Remarks
Dermal	Workers	Long-term systemic effects	27,8 mg/kg bw/day	DNEL
Inhalation	Workers	Long-term systemic effects	98 mg/m₃	DNEL
Inhalation	Workers	Long-term local effects	3 mg/m₃	DNEL
Dermal	Consumers	Long-term systemic effects	11,9 mg/kg bw/day	DNEL
Oral	Consumers	Long-term systemic effects	5,9 mg/kg bw/day	DNEL
Inhalation	Consumers	Long-term systemic effects	20,7 mg/m ³	DNEL

C.I. Pigment Yellow 74

EC-Number: 228-768-4 CAS-Number: 6358-31-2

Route of exposure	End use	Potential health effects	Value	Remarks
Dermal	Workers	Long-term systemic effects	42 mg/kg bw/day	
Inhalation	Workers	Long-term systemic effects	49 mg/m ³	
Inhalation	Workers	Long-term local effects	3 mg/m ³	
Dermal	General Population	Long-term systemic effects	25 mg/kg bw/day	
Oral	General Population	Long-term systemic effects	25 mg/kg bw/day	

1,2-Benzisothiazol-3(2H)-one EC-Number: 220-120-9

CAS-Number: 2634-33-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	6,81 mg/m ³	DNEL
Dermal	Workers	Long-term systemic effects	0,966 mg/kg bw/day	DNEL
Inhalation	Consumers	Long-term systemic effects	1,2 mg/m ³	DNEL
Dermal	Consumers	Long-term systemic effects	0,345 mg/kg bw/day	DNEL

2-Methyl-4-isothiazolin-3-one

CAS-Number: 2682-20-4

EC-Number: 220-239-6

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	0,021 mg/m ³	DNEL
Inhalation	Workers	Acute local effects	0,043 mg/m ³	DNEL

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Inhalation	Consumers	Long-term local effects	0,021 mg/m ³	DNEL
Oral	Consumers	Long-term systemic effects	0,027 mg/kg bw/day	DNEL
Oral	Consumers	Acute systemic effects	0,053 mg/kg bw/day	DNEL

Silica, amorphous, fumed, crystalline free

EC-Number: 601-216-3 CAS-Number: 112945-52-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	4 mg/m ³	DNEL

PNEC-values:

C.I. Pigment Red 254 EC-Number: 402-400-4, 401-540-3 CAS-Number: 84632-65-5

Environmental compartment	Value	
Fresh water	0,499 mg/l	
Marine water	0,499 mg/l	
Intermittend use/release	0,499 mg/l	
Sewage treatment plant	1 mg/l	
Fresh water sediment	668 mg/l	
Marine sediment	668 mg/l	
Soil	1 mg/l	

Silica, amorphous, fumed, crystalline free

EC-Number: 601-216-3

CAS-Number: 112945-52-5

Environmental compartment	Value
Secondary poisoning	60.000 mg/kg (food)

1,2-Benzisothiazol-3(2H)-one EC-Number: 220-120-9 CAS-Number: 2634-33-5

Environmental compartment	Valu	e
Fresh water	0,00403	mg/l
Marine water	0,000403	mg/l
Intermittend use/release	0,0011	mg/l
Sewage treatment plant	1,03	mg/l
Fresh water sediment	0,0499	mg/kg dry weight (d.w.)
Marine sediment	0,00499	mg/kg dry weight (d.w.)
Soil	3	mg/kg dry weight (d.w.)

2-Methyl-4-isothiazolin-3-one CAS-Number: 2682-20-4 EC-Number: 220-239-6

Environmental compartment	Value
Fresh water	0,0039 mg/l
Marine water	0,0039 mg/l
Sewage treatment plant	0,23 mg/l
Soil	0,047 mg/kg dry weight (d.w.)
Intermittent use/release	0,0039 mg/l

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Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) EC-Number: 611-341-5 CAS-Number: 55965-84-9

 Environmental compartment
 Value

 Fresh water
 0,049 µg/l

 Marine water
 0,0098 µg/l

 Sewage treatment plant
 0,045 µg/l

 Soil
 0,009 µg/l

8.2. Exposure controls

Appropriate engineering controls:

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

General protective measures:

Wear suitable protective equipment.

Respiratory protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection:

Nitrile rubber

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection:

Safety glasses

Body protection:

Wear suitable protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Form:	liquid
Colour:	red
Odour:	not significant
Odour threshold:	not required
pH value:	not measured
Melting point:	not applicable
Boiling point:	approx. 100 °C
Flash point:	> 100 °C
Evaporation rate:	not determined
Flammability:	not determined
Lower explosion limit:	not determined
Upper explosive limit:	not determined
Combustion number:	not applicable
Minimum ignition energy:	not determined
Vapour pressure:	not determined
Vapour density relative to air:	not determined
Relative Density:	no data available
Solubility in water:	miscible
Octanol/ water partition	
coefficient (log Pow):	not determined
Ignition temperature:	not determined
Thermal decomposition:	> 100 °C
Viscosity (dynamic):	not tested
Oxidizing properties:	no data available

Acute inhalation toxicity:

Acute dermal toxicity:

Acute oral toxicity:

Acute inhalation toxicity:

Acute dermal toxicity:

Acute oral toxicity:

Acute inhalation toxicity:

2-methyl-2H-isothiazol-3-one (3:1):

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9.2.	Other information Density:	1,24 g/cm³ (20 °C)	
SECTION	10: STABILITY AND REACTIVITY		
10.1.	Reactivity No dangerous reaction known under conditions of normal use.		
10.2.	Chemical Stability Stable under normal conditions.		
10.3.	Possibility of hazardous reactions No dangerous reaction known under conditions of normal use. Stable.		
10.4.	Conditions to avoid None known.		
10.5.	Incompatible Materials No data available.		
10.6.	Hazardous decomposition products No decomposition if stored and applied as directed.		
SECTION	11: TOXICOLOGIC INFORMATION	N	
11.1.	Information on toxicological effe Acute toxicity	ects	
	Informations related to the produ-	<u>CC:</u> Demarka: no dota available	
	Acute inhalation toxicity:	Remarks: no data available	
	Acute dermal toxicity:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method	
	Informations related to the component 1.2-Benzisothiazol-3(2H)-one:		
	Acute oral toxicity:	LD50 (Rat, male and female): 670 - 784 mg/kg Method: OECD Test Guideline 401 GLP: ves	

LC50 (Rat, male and female): 0,5 mg/l

LD50 (Rat, male and female): > 2.000 mg/kg

Assessment: The substance or mixture has no acute

Exposure time: 4 h

dermal toxicity.

LD50 (Rat): 285,5 mg/kg

Test atmosphere: dust/mist Method: OECD Test Guideline 403

LD50 (Rat):> 2.000 mg/kg

LD50 (Rat): 64 mg/kg

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and

LC50 (Rat): 0,11 mg/l Exposure time: 4 h

Method: OECD Test Guideline 401

LC50 (Rat, male and female): 0,171 mg/l

GLP: yes

GLP: yes

Informations related to the component 2-Methyl-4-isothiazolin-3-one:

Test atmosphere: dust/mist Method: OPPTS 870.1300

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Exposure time: 4 h Test atmosphere: dust/mist Acute dermal toxicity: LD50 (Rabbit): 92,4 mg/kg Skin corrosion/irritation Informations related to the product: Species: Rabbit Method: OECD Test Guideline 404 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition. Informations related to the component Alcohols, C16-18 and C18-unsaturated, ethoxylated: Result: Irritating to skin. Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Species: Rabbit Exposure time: 4 h Result: Irritating to skin. GLP:ves Informations related to the component2-Methyl-4-isothiazolin-3-one: Species: rabbit Method: OECD Test Guideline 404 Result: Causes burns. Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): Rabbit Species: Result: Causes burns. Serious eye damage/eye irritation Informations related to the product: Species: rabbit eye Method: OECD Test Guideline 405 Result: No eye irritation Remarks: The toxicological data has been taken from products of similar composition. Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Species: rabbit eye Exposure time: 2,9 h - 11 d Result: Risk of serious damage to eyes. GLP: yes Informations related to the component2-Methyl-4-isothiazolin-3-one: Remarks: Not applicable. Extremely corrosive and destructive to tissue. Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): Species: rabbit eye Result: Risk of serious damage to eyes. Respiratory or skin sensitisation Informations related to the product: Remarks: no data available Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Test Type: Guinea pig maximization test Exposure routes: Dermal

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Species:	Guinea pig Method: Other ResulT: May cause sensitisation by skin contact. GLP: yes
Informations related to the compone	nt 2-Methyl-4-isothiazolin-3-one:
Test Type:	Buehler Test
Orașist	Exposure routes: Dermal
Species:	Guinea pig Method: OECD Test Guideline 406 Result: The product is a skin sensitiser, sub-category 1A. Assessment: Toxic if swallowed, Fatal if inhaled, Causes severe skin burns and eye damage. May cause an allergic skin reaction.
Informations related to the compone 2-methyl-2H-isothiazol-3-one(3:1):	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Species:	Guinea pig
	Method: Other
	Result: The product is a skin sensitiser,
	Assessment: Toxic if swallowed.
	Fatal in contact with skin,
	Fatal ifinhaled,
	Causes severe skin burns and eye damage. May cause an allergic skin reaction
Jerm cell mutagenicity	
Genotoxicity in vitro:	Remarks: no data available
Germ cell mutagenicity-	
Assessment:	No information available.
Informations related to the compone	nt 1.2-Benzisothiazol-3(2H)-one:
Genotoxicity in vitro:	Test Type: Mouse lymphoma assay
	Test system: mouse lymphoma cells Concentration: 0,1 - 12,8 µg/ml
Metabolic activation:	
with and without metabolic	Mathady OFCD Tast Cuidaling 476
activation:	Result: negative
	GLP: yes
	Test Type: Ames test
	Test system: Salmonella typhimurium
Metabolic activation	Concentration: 0,004 - 200 µg/plate
with and without metabolic	
activation:	Method: OECD Test Guideline 471
	Result: negative
	GLF. yes Test Type: Chromosome aberration test in vitro
	Test system: Human lymphocytes Concentration: 1 - 40 μg/ml

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Metabolic activation: with and without metabolic	
activation:	Method: OECD Test Guideline 473 Result: positive GLP: ves
Genotoxicity in vivo:	Test Type: Other Species: Rat (male) Strain: wistar Cell type: Liver cells Application Route: Ingestion Exposure time: single dose Dose: 560 - 1400 mg/kg Method: OECD Test Guideline 486 Result: negative GLP: yes
	Test Type: Micronucleus test Species: Mouse (male and female) Strain: CD1 Cell type: Bone marrow Application Route: Ingestion Exposure time: single dose Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes
Germ cell mutagenicity-	Did not show mutagenic effects in animal experiments
Informations related to the component	2-Methyl-1-isothiazolin-3-one:
Genotoxicity in vitro: Metabolic activation: with and without metabolic	Test Type: Ames test
activation:	Result: negative Test Type: Chromosome aberration test in vitro Test system: mammalian cells
Metabolic activation: with and without metabolic	
activation:	Result: negative
	Test Type: Micronucleus test Test system: mammalian cells
Metabolic activation: with and without metabolic activation:	Result: negative
Assessment:	In vitro tests did not show mutagenic effects, In vivo tests did not show mutagenic effects
Informations related to the component	mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>2-methyl-2H-isothiazol-3-one(3:1):</u>	The first Theory is the second second
Metabolic activation: with and without metabolic	Test Type: In vitro study
activation:	Result: Conflicting results have been seen in different studies
Genotoxicity in vivo:	Test Type: Micronucleus test Species: Rat Cell type: Bone marrow

	Application Route: Oral Exposure time: ≤ 5 d Dose: 1-5 x ≤ 28 mg/kg Result: negative
	Test Type: Micronucleus test Species: Mouse Application Route: Oral Exposure time: $\leq 5 d$ Dose: 1-5 x $\leq 20 - 30 \text{ mg/kg}$ Result: negative
Germ cell mutagenicity- Assessment:	In vivo tests did not show mutagenic effects
Carcinogenicity Informations related to the product: Carcinogenicity -	
Assessment:	No information available.
Informations related to the component	t 1,2-Benzisothiazol-3(2H)-one:
Carcinogenicity - Assessment:	Not applicable
Informations related to the component	2-Methyl-4-isothiazolin-3-one:
Carcinogenicity – Assessment:	Not classifiable as a human carcinogen.
Informations related to the component	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
2-methyl-2H-isothiazol-3-one(3:1):	
Assessment:	No evidence of carcinogenicity in animal studies.
Reproductive toxicity	
Informations related to the product: Reproductive toxicity -	
Assessment:	No information available.
Informations related to the component	t 1,2-Benzisothiazol-3(2H)-one:
Effects on fertility:	Species: Rat, male
	Dose: 18,5 - 97,8 mg/kg
	General Toxicity - Parent: NOAEL: 18,5 mg/kg
	General Toxicity F1: NOAEL: 48 mg/kg body weight Method: Other GLP: yes
	Species: Rat. female
	Application Route: oral (feed) Dose: 27,0 - 114,8 mg/kg General Toxicity - Parent: NOAEL: 27 mg/kg
	body weight General Toxicity F1: NOAEL: 56,6 mg/kg body weight Method: Other
	GLP: yes
Effects on foetal development:	Species: Rat, female Application Route: oral (gavage)
	General Toxicity Maternal: NOAEL: 10 mg/kg body weight

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Reproductive toxicity – Assessment:	 Teratogenicity: NOAEL: 40 mg/kg body weight Method: Directive 67/548/EEC, Annex V, B.31. GLP: yes No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments. Embryotoxicity classification not possible from current data.
Informations related to the componen	t 2-Methvl-4-isothiazolin-3-one:
Effects on fertility:	Remarks: This information is not available.
Effects on foetal development:	Remarks: Based on available data, the classification criteriaare not met.
Reproductive toxicity - Assessment:	No evidence of adverse effects on sexual function and fertility,or on development, based on animal experiments.
Informations related to the componen	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
2-methyl-2H-isothiazol-3-one(3:1):	
Effects on fertility:	Species: Rat, male and female Application Route: Drinking water Dose: 25 - 75 - 225 ppm General Toxicity - Parent: NOAEL: 16,3 - 24,7 mg/kg body weight General Toxicity F1: NOAEL: 16,3 - 24,7 mg/kg body weight Method: Other GLP: yes
	Species: Rat, male and female Application Route: Drinking water Dose: 30 - 100 - 300 ppm General Toxicity - Parent: NOAEL: 2,8 - 4,4 mg/kg body weight General Toxicity F1: NOAEL: 22,7 - 28 mg/kg body weight General Toxicity F2: NOAEL: 35,7 - 39,1 mg/kg body weight Method: OECD Test Guideline 416 GLP: ves
Effects on foetal development:	Species: Rat, male and female Application Route: oral (gavage) Dose: ≤ 15 mg/kg
Developmental Toxicity:	NOAEL: 15 mg/kg body weight Method: Other Species: Rat, male and female Application Route: oral (gavage) General Toxicity Maternal: NOAEL: ≤ 3,95 mg/kg body weight Method: Other
Reproductive toxicity – Assessment:	Weight of evidence does not support classification for reproductive toxicity Embryotoxicity classification not possible from current data.
STOT - single exposure	

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Informations related to the component product: Remarks: no data available

CULR[™] Art Pigment for Epoxy – Tomato Red Tradename: page 14/11 Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure. Informations related to the component 2-Methyl-4-isothiazolin-3-one: Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure. Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure. STOT - repeated exposure Informations related to the component product: Remarks: no data available Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure. Informations related to the component 2-Methyl-4-isothiazolin-3-one: Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure. Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure. **Repeated dose toxicity** Informations related to the product: Remarks: This information is not available. Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Species: Dog, male and female NOAEL: 5 mg/kg LOAEL: 20 mg/kg Application Route: oral (gavage) Exposure time: 90 d Number of exposures: daily Dose: 5 - 20 - 50 mg/kg Group: yes Method: 88/302/EC GLP: yes Informations related to the component 2-Methyl-4-isothiazolin-3-one: Species: Rat NOAEL: 25 mg/kg Application Route: Oral Exposure time: 90 d Remarks: By analogy with a product of similar composition Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): Species: Rat, male and female NOAEL: 16,3 - 24,7 mg/kg ApplicationRoute: Drinking water Exposure time: 90 d

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Number of exposures: daily Dose: 25 - 75 - 225 ppm Group: yes Method: Other GLP: yes

Aspiration toxicity

Informations related to the product: no data available

Informations related to the component 2-Methyl-4-isothiazolin-3-one: No aspiration toxicity classification

Informations related to the component 1,2-Benzisothiazol-3(2H)-one: No aspiration toxicity classification

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): No aspiration toxicity classification

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Informations related to the product:	
Toxicity to fish:	Remarks: no data available
Toxicity to daphnia and other	
aquatic invertebrates:	Remarks: no data available
Toxicity to algae:	Remarks: no data available
Toxicity to fish (Chronic toxicity):	Remarks: no data available
Toxicity to microorganisms:	Remarks: no data available
Informations related to the componen	t Alcohols, C16-18 and C18-unsaturated, ethoxylated:
M-Factor	
(Acute aquatic toxicity):	1
Ecotoxicology Assessment	
Acute aquatic toxicity:	Very toxic to aquatic life.
Chiome aquatic toxicity.	rianniul to aquatic life with long lasting effects.
Informations related to the componen	t 1,2-Benzisothiazol-3(2H)-one:
Toxicity to fish :	LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l
	Exposure time: 96 h
	Lest Type: static test
	Analytical monitoring, yes Method: OECD Test Guideline 203
	GLP: ves
	LC50 (Cyprinodon variegatus (sheepshead minnow)): approx.16.7 mg/l
	Exposure time: 96 h
	Test Type: static test
	Analytical monitoring: yes
	Method: No information available.
	GLP: yes
Toxicity to daphnia and other	
aquatic invertebrates:	EC50 (Daphnia magna (Water fiea)): 2,94 mg/l
	Exposure unite. 40 n Test Type: static test
	Analytical monitoring: yes
	Method: OECD Test Guideline 202
	GLP: yes

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		EC0 (Daphnia magna (Water flea)): 0,643 Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes	mg/l
		EC50 (Mysidopsis bahia (opossum shrimp Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water)): 0,9893 mg/l
Toxicity	to algae:	NOEC (Mysidopsis bahia (opossum shrim Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water EC50 (Selenastrum capricornutum (green 0,155 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes	p)): 0,25 mg/l algae)):
		NOEC (Selenastrum capricornutum (greer 0,055 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes	ו algae)):
M-Facto (Acu Toxicity	r te aquatic toxicity): to microorganisms:	1 EC50 (activated sludge of a predominantly sewage): 23 mg/l End point: Bacteria toxicity (respiration inh Exposure time: 3 h Test Type: aquatic Analytical monitoring: no Method: OECD Test Guideline 209 GLP: yes Remarks: The details of the toxic effect rel nominal concentration.	/ domestic ibition) late to the
		EC50: > 811,5 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect rel nominal concentration.	ate to the
		NOEC: 263,7 mg/kg dry weight (d.w.) Exposure time: 28 d	

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	Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.	9
Toxicity to fish (Chronic toxicity):	NOEC: 0,21 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Analytical monitoring: yes Method: OECD Test Guideline 215 GLP: yes	
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 1,2 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes	
	NOEC: 1,9 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes	
Toxicity to soil dwelling organisms:	Test Type: artificial soil LC50: > 410,6 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.	¢
	Test Type: artificial soil NOEC: 234,5 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.	2
Plant toxicity:	EC50: 340 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.	9

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	NOEC: 90 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
	EC50: 300 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
	NOEC: 51 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
Sediment toxicity: Ecotoxicology Assessment Acute aquatic toxicity: Chronic aquatic toxicity:	Remarks: not available Very toxic to aquatic life. Toxic to aquatic life with long lasting effects
Informations related to the componen Toxicity to fish:	<u>t 2-Metnyl-4-Isotniazolin-3-one:</u> LC50 (Oncorhynchus mykiss (rainbow trout)): 4,77 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 0,934 mg/l End point: mortality Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae:	NOEC (Pseudokirchneriella subcapitata (green algae)): 0,0104 mg/l End point: Biomass Exposure time: 96 h Method: OECD Test Guideline 201
	EC50 (Pseudokirchneriella subcapitata (algae)): 0,063 mg/l End point: Biomass Exposure time: 96 h Method: OECD Test Guideline 201
M-Factor	10
Toxicity to microorganisms:	EC50 (Bacteria): 31,7 mg/l Exposure time: 3 h

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Toxicity to fish (Chronic toxicity): Toxicity to daphnia and other	Remarks: no data available
aquatic invertebrates (Chronic toxicity):	Remarks: no data available
Acute aquatic toxicity: Chronic aquatic toxicity:	Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.
Informations related to the component 2-methyl-2H-isothiazol-3-one(3:1):	mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Toxicity to fish:	EC50 (Oncorhynchus mykiss (rainbow trout)): 0,22 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 0,1 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae:	EC50 (Skeletonema costatum (marine diatom)): 0,0052 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 201
	NOEC (Skeletonema costatum (marine diatom)): 0,00049 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity):	100
Toxicity to microorganisms:	EC50 (activated sludge): 7,92 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to fish	
(Chronic toxicity):	NOEC: 0,098 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Method: OECD Test Guideline 215
Toxicity to daphnia and other aquatic invertebrates	
(Chronic toxicity):	NOEC: 0,004 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
M-Factor (Chronic aquatic toxicity):	10
organisms:	LC50: 86,6 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207
	NOEC: 8,83 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) OECD Test Guideline 207

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	Ecotoxicology Assessment Acute aquatic toxicity: Chronic aquatic toxicity:	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
12.2.	Persistence and degradability Informations related to the product: Biodegradability:	no data available
	Informations related to the componen	t 1,2-Benzisothiazol-3(2H)-one:
	Biodegradability:	Test Type: aerobic Inoculum: activated sludge Concentration: 1 mg/l Result: Partially biodegradable. Exposure time: 63 d Method: OECD Test Guideline 301C GLP: yes
	Physico-chemical removability: Stability in water:	Remarks: Biodegradable Test Type: abiotic Degradation half life: 219 d pH: 4 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
		Test Type: abiotic Degradation half life: > 200 d pH: 7 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes
	Photodegradation:	Test Type: abiotic Degradation half life: 145 d pH: 9 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes Test Type: water Light source: Xenon lamp Light spectrum: 290 - 400 nm Degradation (direct photolysis): < 1,5 % GLP: yes
		Test Type: air Method: calculated GLP: no Remarks: Decomposes rapidly in contact with light.
	Informations related to the componen Biodegradability:	<u>t 2-Methyl-4-isothiazolin-3-one:</u> Test Type: aerobic Result: Not rapidly biodegradable
	Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1).	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	Biodegradability:	Test Type: aerobic Inoculum: activated sludge Result: Not rapidly biodegradable Method: OECD Test Guideline 301B
	Photodegradation:	Test Type: water Light source: Sunlight

12.3. Bioaccumulative potential	
Informations related to the product:	
Bioaccumulation:	no data available
Informations related to the componen	<u>it 1,2-Benzisothiazol-3(2H)-one:</u>
Bioaccumulation:	Species: Lepomis macrochirus (Bluegill sunfish) Exposure time: 56 d Concentration: 0.1 mg/l
	Bioconcentration factor (BCF): 6,62
	Method: OECD Test Guideline 305 GLP: no
	Remarks: Due to the distribution coefficient n-octanol/water,accumulation in organisms is not expected.
Informations related to the componer	t 2-Methyl-4-isothiazolin-3-one:
Bioaccumulation:	Remarks: Due to the distribution coefficient n-octanol/water,accumulation in organisms is not expected.
Informations related to the componer	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
2-methyl-2H-isothiazol-3-one(3:1):	
Bioaccumulation:	Bioconcentration factor (BCF): 3,6
	Remarks: Does not accumulate in organisms.
Partition coefficient	5
n-octanol/water:	log Pow: -0,71 - 0,75 Method: OECD Test Guideline 107
12.4. Mobility in soil	
Informations related to the componen	<u>it 1,2-Benzisothiazol-3(2H)-one:</u>
Distribution among	
environmental compartments:	Adsorption/Soil Modium: watersoil
	Koc: 235 – 566
	Method: Other
Informations related to the componer	t 2-Methyl-4-isothiazolin-3-one:
Distribution among environmental compartments:	Remarks: no data available
12.5. Results of PBT and vPvB assessme	nt
Informations related to the product: This substance/mixture contains no c	omponents considered to be either persistent,
of 0,1 % or higher.	
Informations related to the componen Assessment:	<u>it 1,2-Benzisothiazol-3(2H)-one:</u> The substance is not identified as a PBT or as a vPvB substance.
Informations related to the componen Assessment:	<u>it 2-Methyl-4-isothiazolin-3-one:</u> Remarks: no data available
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Assessment:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
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12.6.	Other adverse effects		
	Informations related to the product:		
	Environmental fate and pathways:	no data available	
	Additional ecological information:	Do not allow to enter ground water, waterways or waste water.	
Informations related to the component 1,2-Benzisothiazol-3(2H)-one:		t 1,2-Benzisothiazol-3(2H)-one:	
	Environmental fate andpathways:	not available	
	Additional ecological information:	Do not allow to enter ground water, waterways or waste water.	
	Informations related to the component 2-Methyl-4-isothiazolin-3-one:		
	Environmental fate and pathways:	no data available	
Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-o 2-methyl-2H-isothiazol-3-one(3:1):		t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and	
	Additional ecological information:	The product should not be allowed to enter drains, watercourses or the soil.	

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product:

Product should be taken to a suitable and authorized waste disposal site in accordance with relevant regulations and if necessary after consultation with the waste disposal operator and/or the competent Authorities.

Uncleaned packaging:

Packaging that cannot be cleaned should be disposed of as product waste.

SECTION 14: TRANSPORT INFORMATION

14.1. to 14.5.

ADR:	not restricted
ADN:	not restricted
RID:	not restricted
IATA:	not restricted
IMDG:	not restricted

14.6. Special precautions for users

See sections 6 to 8 of this Safety Data Sheet.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No transport as bulk according IBC-Code.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of	
Very High Concern for Authorisation (Article 59):	Not applicable
REACH - List of substances subject to authorisation	
(Annex XIV):	Not applicable
Regulation (EC) No 1005/2009 on substances that	
deplete the ozone layer:	Not applicable
Regulation (EC) No 850/2004 on persistent	
organic pollutants:	Not applicable

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

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15.2. Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

SECTION 16: OTHER INFORMATION

Observe the legal requirements nationally and locally.

List of the text of the hazard statements mentioned section 3 (H-phrases):

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute toxicity
Short-term (acute) aquatic hazard
Long-term (chronic) aquatic hazard
Serious eye damage
Skin corrosion
Skin irritation
Skin sensitisation
Specific target organ toxicity - repeated exposure

Change compared to the previous version:

Change in the composition

Legend

ADN	European Agreement concerning the International Carriage of
	Dangerous Goods by Inland Waterways
AUK	European Agreement concerning the International Carnage of
	Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ASTM	American Society for the Testing of Materials
bw	Body weight
CLP	Classification Labelling Packaging Regulation
	Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DIN	Standard of the German Institute for Standardisation
DMEL	Derived Minimal Effect Level (genotoxic substances)
DNEL	Derived No Effect Level
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC-Number	European Community number
ECx	Concentration associated with x% response
ELx	Loading rate associated with x% response
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
ErCx	Concentration associated with x% growth rate response
GHS	Globally Harmonized System
GLP	Good Laboratory Practice
IARC	International Agency for Research on Cancer

in acc. with Regulation (EU) No. 2015/830

Tradename:	CULR [™] Art Pigment for Epoxy – Tomato Red	page	24/11
IATA	International Air Transport Association		
IBC	International Code for the Construction and Equipment of Ships		
	carrying Dangerous Chemicals in Bulk		
IC50	Half maximal inhibitory concentration		
ICAO	International Civil Aviation Organization		
IECSC	Inventory of Existing Chemical Substances in China		
IMDG	International Maritime Dangerous Goods		
IMO	International Maritime Organization		
ISHL	Industrial Safety and Health Law (Japan)		
ISO	International Organisation for Standardization		
KECI	Korea Existing Chemicals Inventory		
LC50	Lethal Concentration to 50 % of a test population		
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)		
MARPOL	International Convention for the Prevention of Pollution from Ships		
n.o.s.	Not Otherwise Specified		
NO(A)EC	No Observed (Adverse) Effect Concentration		
NO(A)EL	No Observed (Adverse) Effect Level		
NOELR	No Observable Effect Loading Rate		
NZIOC	New Zealand Inventory of Chemicals		
OECD	Organization for Economic Co-operation and Development		
OPPIS	Office of Chemical Safety and Pollution Prevention		
PBI	Persistent, Bioaccumulative and Toxic substance		
PICCS	Philippines Inventory of Chemicals and Chemical Substances		
(Q)SAR	(Quantitative) Structure Activity Relationship		
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of t	ne	
	Council concerning the Registration, Evaluation, Authonsation and		
חוס	Resulction of Chemicals		
RID	Regulations concerning the International Carnage of Dangerous Go	ous	
SVDT	Dy Rdll Solf Accolorating Decomposition Tomporature		
SADI	Seli-Accelerating Decomposition Temperature		
	Taiwan Chamical Substance Inventory		
TRCS	Technical Rule for Hazardous Substances		
TSCA	Toxic Substances Control Act (United States)		
	United Nations		
vPvR	Very Persistent and Very Bioaccumulative		
	Very Foreionent and Very Dioaccumulative		

Decimal notation: "thousands" places are identified with a dot (for example, "2.000 mg/kg" means "two thousand mg/kg"). Decimal places are identified with a comma (for example, "1,35 g/cm³" means "one point three five g/cm³").

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Easy Composites Ltd makes no warranties, express or implied, as to the information accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Easy Composites Ltd products for its particular application. Nothing included in this information waives any of Easy Composites Ltd General Terms and Conditions of Sale, which control unless it agrees otherwise in writing.

Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Easy Composites Ltd products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products.

For additional information, please contact Easy Composites Ltd.

SAFETY DATA SHEET

1

in acc. with Regulation (EU) No. 2015/830

GlassCast

Revision Date: 04/02/2019

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Tradename: CULR[™] Art Pigment for Epoxy – Leaf Green

SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

.1.	Product identifier Tradename:	CULR™ Art Pigment for Epoxy – Leaf Green
	Chemical characterisation:	C.I. Pigment Green 7, Yellow 73, Yellow 74, Yellow 42, Red 101, Yellow 3 and Calciumcarbonat in aqueous dispersion, contenting Polyglykol and 1,2-Propandiol.

1.2. Relevant identified uses of the substance or mixture and uses advised again

Relevant identified uses of the substance or mixture: Industry sector: Industrial Performance Chemicals

muusuy sector.	
	Paints, lacquers and varnishes industry
	Polymers industry
	Printing Inks Industry
Type of use:	Colourant preparation

1.3. Details of the supplier of the safety data sheet

Identification of the company: Easy Composites Ltd Unit 39 Park Hall Business Village Stoke on Trent, ST3 5XA. United Kingdom. Phone: +44 (0)1782 454499

Information to substance / mixture: Division: Technical E-mail: technical@glasscastresin.com

1.4. Emergency telephone number Emergency CONTACT (Office Hours) Phone: +44 (0)1782 454499

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance / mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Categoryof danger	Category HazardSymbol	H-Phrases

Not a hazardous substance or mixture.

2.2. Label elements

Labelling according CLP regulation (Regulation (EC) No. 1272/2008, as amended): Not a hazardous substance or mixture.

Additional Labelling:

EUH 208 contains mixture of:	1,2-Benzisothiazol-3(2H)-one, mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1).
	May produce an allergic reaction.
EUH210:	Safety data sheet available on request.

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1 % or higher. No hazards to be specially mentioned.

CULR[™] Art Pigment for Epoxy – Leaf Green Tradename:

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SECTION 3: COMPOSITION / INFORMATION TO INGREDIENTS

3.1. Mixtures

Hazardous ingredients:

Alcohols, C16-18 and C18-unsaturated, ethoxylated (8 EO)

Concentration:	≥ 9,2 - ≤ 12,1 %
CAS-Number:	68920-66-1
EC-Number:	500-236-9

GHS classification EC:

Skin irritation	Category 2	H315
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 3	H412
M-Factor (Acute aquatic toxicity)		1

M-Factor (Acute aquatic toxicity)

Rosin amine

Concentration:	≥ 0,1 - ≤ 0,25 %
CAS-Number:	61790-47-4
EC-Number:	263-139-8
Registrationnumber:	01-2120780340-61-XXXX

GHS classification EC:

Acute toxicity	Category 4	H302
Skin irritation	Category 2	H315
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Aquatic chronic	Category 1	H410
M-Factor (Acute aquatic toxicity)	10	
M-Factor (Chronic aquatic toxicity)	1	

1-Propanaminium, 3-Amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18-Acylderivate, Hydroxide, inner salts

Concentration:	≥ 1,0 - ≤ 2,5 %
CAS-Number:	97862-59-4
EC-Number:	308-107-7
Registrationnumber:	01-2119488533-30-0011

GHS classification EC:

Serious eye damage	Category 1	H318
Chronic aquatic toxicity	Category 3	H412

1,2-Benzisothiazolin-3-on

Concentration:	≥ 0,0025 - ≤ 0,025 %
CAS-Number:	2634-33-5
EC-Number:	220-120-9
INDEX-No.:	613-088-00-6
Registrationnumber:	01-2120761540-60

GHS classification EC:

Acute toxicity	Category 4	H302
Fatal ifinhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 2	H411

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Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1)

 Concentration:
 $\geq 0,0002 - \leq 0,0015 \%$

 CAS-Number:
 55965-84-9

 EC-Number:
 611-341-5

 INDEX-No.:
 613-167-005

 Registrationnumber:
 01-2120764691-48

GHS classification EC:

Acute toxicity	Category 3	H301
Acute toxocity	Category 2	H310
Fatal ifinhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314
May cause an alergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category1	H410

The text of H-phrases is shown in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Discription of first aid measures

General information:

Get medical advice/ attention if you feel unwell.

After inhalation:

Move the victim to fresh air.

If you feel unwell, seek medical advice (show the label where possible).

After contact with skin:

In case of contact with skin, clean with plenty of soap and water.

After contact with eyes:

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion:

If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed symptoms

Symptoms:

None known.

<u>Hazards:</u> None known.

4.3. Indication of any immediate medical attention and special treatment needed Treatment:

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray jet Dry powder Carbon dioxide (CO₂) Alcohol resistant foam

Extinguishing media that must not be used for safety reasons: High volume water jet

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5.2. Special hazards arising from the substance or mixture

In case of fires, hazardous combustion gases are formed: Carbon oxides (CO_x) Nitrogen oxides (NO_x) Hydrogen chloride (HCI) Sulphur oxides (SO_x)

5.3. Advice for firefighters

Special protective equipment for firefighting: Use self-contained breathing apparatus. <u>Further information:</u>

Wear suitable protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures Wear suitable personal protective equipment.

6.2. Environment precautions

The product should not be allowed to enter drains, water courses or the soil.

 6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

<u>Additional information:</u> Information regarding safe handling, see chapter 7.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

<u>Advice on safe handling:</u>

When used and handled appropriately no special measures are needed.

<u>Hygiene measures:</u> Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

<u>Further information on storage conditions:</u> Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Keep away from flames and sparks.

Storage stability:

Minimum 36 months.

7.3. Specific end use(s)

No further recommendations.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

<u>Exposure limit values:</u> Exposure limit values are not available.

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DNEL / DMEL-values: C.I. Pigment Yellow 74 EC-Number: 228-768-4 CAS-Number: 6358-31-2

Route of exposure	End use	Potential health effects	Value	Remarks
Dermal	Workers	Long-term systemic effects	42 mg/kg bw/day	
Inhalation	Workers	Long-term systemic effects	49 mg/m ³	
Inhalation	Workers	Long-term local effects	3 mg/m ³	
Dermal	General Population	Long-term systemic effects	25 mg/kg bw/day	
Oral	General Population	Long-term systemic effects	25 mg/kg bw/day	

C.I. Pigment Green 7

EC-Number: 215-524-7 CAS-Number: 1328-53-6

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	10 mg/m ³	DNEL
Inhalation	Consumers	Long-term local effects	10 mg/m ³	DNEL

C.I. Pigment Yellow 42

EC-Number: 257-098-5

CAS-Number: 51274-00-1

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	10 mg/m ³	DNEL

Iron(III)-Oxide

EC-Number: 215-168-2 CAS-Number: 1309-37-1

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	10 mg/m ³	DNEL, inhalable dust

1,2-Benzisothiazol-3(2H)-one

EC-Number: 220-120-9

CAS-Number: 2634-33-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	6,81 mg/m ³	DNEL
Dermal	Workers	Long-term systemic effects	0,966 mg/kg bw/day	DNEL
Inhalation	Consumers	Long-term systemic effects	1,2 mg/m ³	DNEL
Dermal	Consumers	Long-term systemic effects	0,345 mg/kg bw/day	DNEL

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Silica, amorphous, fumed, crystalline free EC-Number: 601-216-3 CAS-Number: 112945-52-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	4 mg/m ³	DNEL

1-Propanaminium, 3-Amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18-Acylderivate, Hydroxide, inner salts EC-Number: 30-107-7

CAS-Number: 97862-59-4

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	44 mg/m ³	DNEL
Skin contact	Workers	Long-term systemic effects	12,5 mg/kg bw/day	DNEL
Skin contact	General population	Long-term systemic effects	7,5 mg/kg bw/day	DNEL
Ingestion	General population	Long-term systemic effects	7,5 mg/kg bw/day	DNEL

Glycerine

EC-Number: 200-289-5 CAS-Number: 56-81-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	56 mg/m ³	DNEL
Inhalation	General population	Long-term local effects	33 mg/m ³	DNEL
Ingestion	General population	Long-term systemic effects	229 mg/kg bw/day	DNEL

PNEC-values:

 $\label{eq:linear} 1-Propanaminium, \ 3-Amino-N-(carboxymethyl)-N, N-dimethyl-, \ N-C8-18-Acylderivate,$

Hydroxide, inner salts

EC-Number: 30-107-7

CAS-Number: 97862-59-4

Environmental compartment	Value
Fresh water	0,013 mg/l
Salt water	0,001 mg/l
Water (intermittent release)	3000 mg/l
Fresh water sediment	1 mg/kg dry weight (d.w.)
Marine sediment	0,1 mg/kg dry weight (d.w.)
Soil	0,8 mg/kg dry weight (d.w.)

1,2-Benzisothiazol-3(2H)-one

EC-Number: 220-120-9 CAS-Number: 2634-33-5

Environmental compartment	Value
Fresh water	0,00403 mg/l
Marine water	0,000403 mg/l
Intermittend use/release	0,0011 mg/l
Sewage treatment plant	1,03 mg/l

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Fresh water sediment	0,0499 mg/kg dry weight (d.w.)	
Marine sediment	0,00499 mg/kg dry weight (d.w.)	
Soil	3 mg/kg dry weight (d.w.)	

Silica, amorphous, fumed, crystalline free EC-Number: 601-216-3 CAS-Number: 112945-52-5

Environmental compartment	Value
Secondary poisoning	60.000 mg/kg (food)

Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) 611-341-5 EC-Nummer: С

CAS-Nummer:	55965-84-9

Environmental compartment	Value
Fresh water	0,049 µg/l
Marine water	0,0098 µg/l
Sewage treatment plant	0,045 μg/l
Soil	0,009 µg/l

Glycerine

EC-Number: 200-289-5 CAS-Number: 56-81-5

Environmental compartment	Value
Fresh water	0,885 mg/l
Marine water	0,088 mg/l
Sewage treatment plant	1000 mg/l
Fresh water sediment	3,33 mg/kg dry weight (d.w.)
Marine sediment	0,33 mg/kg dry weight (d.w.)
Soil	0,141 mg/kg dry weight (d.w.)

8.2. Exposure controls

Appropriate engineering controls:

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

General protective measures:

Wear suitable protective equipment.

Respiratory protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection:

Nitrile rubber

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection: Safety glasses

Body protection:

Wear suitable protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Form:	liquid
Colour:	green
Odour:	not significant
Odour threshold:	not required

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	pH value:	not measured
	Melting point:	not applicable
	Boiling point:	approx. 100 °C
	Flash point:	> 100 °C
	Evaporation rate:	not determined
	Flammability:	not determined
	Lower explosion limit:	not determined
	Upper explosive limit:	not determined
	Combustion number:	not applicable
	Minimum ignition energy:	not determined
	Vapour pressure:	not determined
	Vapour density relative to air:	not determined
	Relative Density:	no data available
	Solubility in water:	miscible
	Octanol/ water partition	
	coefficient (log Pow):	not determined
	Ignition temperature:	not determined
	Thermal decomposition:	> 100 °C
	Viscosity (dynamic):	not tested
	Oxidizing properties:	no data available
9.2.	Other information	
	Density:	1,27 g/cm³ (20 °C)

SECTION 10: STABILITY AND REACTIVITY

- **10.1. Reactivity** No dangerous reaction known under conditions of normal use.
- **10.2. Chemical Stability** Stable under normal conditions.
- 10.3. Possibility of hazardous reactions
 No dangerous reaction known under conditions of normal use.
 Stable.

 10.4. Conditions to avoid

None known.

- **10.5.** Incompatible Materials No data available.
- **10.6. Hazardous decomposition products** No decomposition if stored and applied as directed.

SECTION 11: TOXICOLOGIC INFORMATION

11.1. Information on toxicological effects

Acute toxicity

5	
Informations related to the pro	<u>oduct:</u>
Acute oral toxicity:	Remarks: no data available
Acute inhalation toxicity:	Remarks: no data available
Acute dermal toxicity:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method
Informations related to the con	<u>mponent Rosin amine:</u>
Acute oral toxicity:	LD50 (Rat, male and female):

LD50 (Rat, male and female): 300 - 2.000 mg/kg Method: OECD Test Guideline 423

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	Acute inhalation toxicity: Acute dermal toxicity:	Assessment: The component/mixture is moderately toxic after single ingestion. Remarks: no data available LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity Remarks: Not applicable
	Information related to the component	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,
	Acute oral toxicity:	LD50 (Rat):> 5.000 mg/kg
	Informations related to the component	1,2-Benzisothiazol-3(2H)-one:
	Acute oral toxicity:	LD50 (Rat, male and female): 670 - 784 mg/kg Method: OECD Test Guideline 401 GLP: yes
	Acute inhalation toxicity:	LC50 (Rat, male and female): 0,5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OPPTS 870.1300 GLP: ves
	Acute dermal toxicity:	LD50 (Rat, male and female): > 2.000 mg/kg GLP: yes Assessment: The substance or mixture has no acute dermal toxicity.
	Informations related to the component 2-methyl-2H-isothiazol-3-one (3:1): Acute oral toxicity: Acute inhalation toxicity:	LD50 (Rat): 64 mg/kg LC50 (Rat, male and female): 0,171 mg/l
	Acute dermal toxicity:	Exposure time: 4 h Test atmosphere: dust/mist LD50 (Rabbit): 92,4 mg/kg
ŝ	Skin corrosion/irritation	
	Species:	EPISKIN Human Skin Model Test Method: OECD Test Guideline 439 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition.
	Species:	Rabbit Method: OECD Test Guideline 404 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition.
	Informations related to the component Species:	<u>Rosin amine:</u> In Vitro Membrane Barrier Test Method for Skin Corrosion – CORROSITEX Method: OECD Test Guideline 431 Result: Irritating to skin.
	Informations related to the component	Alcohols, C16-18 and C18-unsaturated, ethoxylated:
	Result:	Irritating to skin.
	Informations related to the component	1,2-Benzisothiazol-3(2H)-one:
	Species:	Rabbit Exposure time: 4 h

	Result: Irritating to skin. GLP: yes
Informations related to the compone 2-methyl-2H-isothiazol-3-one(3:1):	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Species:	Rabbit Result: Causes burns.
Serious eye damage/eye irritation	
Informations related to the product:	Bovine cornea
	Method: OECD Test Guideline 437 Result: No eye irritation Remarks: The toxicological data has been taken from products of similar composition.
Species:	rabbit eye Method: OECD Test Guideline 405 Result: No eye irritation Remarks: The toxicological data has been taken from products of similar composition.
Informations related to the compone Method:	<u>nt Rosin amine:</u> OECD Test Guideline 437 Result: Risk of serious damage to eyes.
Informations related to the compone	nt 1,2-Benzisothiazol-3(2H)-one:
Species:	rabbit eye Exposure time: 2,9 h - 11 d Result: Risk of serious damage to eyes. GLP: yes
Informations related to the compone 2-methyl-2H-isothiazol-3-one(3:1):	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Species:	rabbit eye Result: Risk of serious damage to eyes.
Respiratory or skin sensitisation	
Informations related to the product:	
Remarks:	no data available
Informations related to the compone Test Type:	nt Rosin amine: Mouse local lymphnode assay Exposure routes: Skin contact Species: Mouse Result: The product is a skin sensitiser, sub-category 1A.
Informations related to the compone	nt 1,2-Benzisothiazol-3(2H)-one:
Test Type:	Guinea pig maximization test
Species:	Guinea pig Method: Other
	Result: May cause sensitisation by skin contact. GLP: yes
Informations related to the compone	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-
methyl-2H-isothiazol-3-one(3:1):	Cuince nig
Species:	Guinea pig Method: Other Result: The product is a skin sensitiser,

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CULR[™] Art Pigment for Epoxy – Leaf Green Tradename: page 11/25 Assessment: Toxic if swallowed, Fatal in contact with skin, Fatal ifinhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Germ cell mutagenicity Informations related to the product: Genotoxicity in vitro: Remarks: no data available Germ cell mutagenicity-Assessment: No information available. Informations related to the component Rosin amine: Genotoxicity in vitro: Test Type: Ames test Result: negative Germ cell mutagenicity-Assessment: In vitro tests did not show mutagenic effects Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Genotoxicity in vitro: Test Type: Mouse lymphoma assay Test system: mouse lymphoma cells Concentration: 0,1 - 12,8 µg/ml Metabolic activation: with and without metabolic Method: OECD Test Guideline 476 activation: Result: negative GLP: yes Test Type: Ames test Test system: Salmonella typhimurium Concentration: 0,064 - 200 µg/plate Metabolic activation: with and without metabolic activation: Method: OECD Test Guideline 471 **Result:** negative GLP: ves Test Type: Chromosome aberration test in vitro Test system: Human lymphocytes Concentration: 1 - 40 µg/ml Metabolic activation: with and without metabolic Method: OECD Test Guideline 473 activation: Result: positive GLP: yes Test Type: Other Genotoxicity in vivo: Species: Rat (male) Strain: wistar Cell type: Liver cells Application Route: Ingestion Exposure time: single dose Dose: 560 - 1400 mg/kg Method: OECD Test Guideline 486 Result: negative GLP: yes Test Type: Micronucleus test Species: Mouse (male and female) Strain: CD1 Cell type: Bone marrow Application Route: Ingestion

	Exposure time: single dose Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes
Germ cell mutagenicity- Assessment:	Did not show mutagenic effects in animal experiments.
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Genotoxicity in vitro: Metabolic activation: with and without metabolic	Test Type: In vitro study
activation:	Result: Conflicting results have been seen in different studies
Genotoxicity in vivo:	Test Type: Micronucleus test Species: Rat Cell type: Bone marrow Application Route: Oral Exposure time: $\leq 5 d$ Dose: 1-5 x $\leq 28 \text{ mg/kg}$ Result: negative
	Test Type: Micronucleus test Species: Mouse Application Route: Oral Exposure time: $\leq 5 d$ Dose: 1-5 x $\leq 20 - 30 \text{ mg/kg}$ Result: negative
Germ cell mutagenicity- Assessment:	In vivo tests did not show mutagenic effects
Carcinogenicity	
Informations related to the product:	
Carcinogenicity - Assessment:	No information available.
Informations related to the componen	<u>t Rosin amine:</u>
Carcinogenicity – Assessment:	No information available.
Informations related to the componen	t 1,2-Benzisothiazol-3(2H)-one:
Carcinogenicity - Assessment:	Not applicable
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Carcinogenicity - Assessment:	No evidence of carcinogenicity in animal studies.
Reproductive toxicity	
Informations related to the product: Reproductive toxicity - Assessment:	No information available.
Informations related to the componen	t Rosin amine:
Reproductive toxicity – Assessment:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

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Informations related to the component	t 1,2-Benzisothiazol-3(2H)-one:
Effects on fertility:	Species: Rat, male Application Route: oral (fed) Dose: 18,5 - 97,8 mg/kg General Toxicity - Parent: NOAEL: 18,5 mg/kg body weight General Toxicity F1: NOAEL: 48 mg/kg body weight Method: Other GLP: yes
	Species: Rat, female Application Route: oral (feed) Dose: 27,0 - 114,8 mg/kg General Toxicity - Parent: NOAEL: 27 mg/kg body weight General Toxicity F1: NOAEL: 56,6 mg/kg body weight Method: Other GLP: yes
Effects on foetal development:	Species: Rat, female Application Route: oral (gavage) Dose: 10 - 40 - 100 mg/kg General Toxicity Maternal: NOAEL: 10 mg/kg body weight Teratogenicity: NOAEL: 40 mg/kg body weight Method: Directive 67/548/EEC, Annex V, B.31. GLP: yes
Reproductive toxicity – Assessment:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments. Embryotoxicity classification not possible from current data.
Informations related to the componen	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>2-methyl-2H-isothiazol-3-one(3:1):</u> Effects on fertility:	Species: Rat, male and female Application Route: Drinking water Dose: 25 - 75 - 225 ppm General Toxicity - Parent: NOAEL: 16,3 - 24,7 mg/kg body weight General Toxicity F1: NOAEL: 16,3 - 24,7 mg/kg body weight Method: Other GLP: yes
	Species: Rat, male and female Application Route: Drinking water Dose: 30 - 100 - 300 ppm General Toxicity - Parent: NOAEL: 2,8 - 4,4 mg/kg body weight General Toxicity F1: NOAEL: 22,7 - 28 mg/kg body weight General Toxicity F2: NOAEL: 35,7 - 39,1 mg/kg body weight Method: OECD Test Guideline 416 GLP: ves
Effects on foetal development:	Species: Rat, male and female Application Route: oral (gavage)
Developmental Toxicity:	NOAEL: 15 mg/kg body weight Method: Other

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Reprod	uctive toxicity – Assessment:	Species: Rat, male and female Application Route: oral (gavage) General Toxicity Maternal: NOAEL: ≤ 3,95 m body weight Method: Other Weight of evidence does not support classific reproductive toxicity Embryotoxicity classification not possible from data.	g/kg ation f [,] n curre	or ent
STOT - s	ingle exposure			
<u>Informa</u> Remark	tions related to the componen s:	<u>t product:</u> no data available		
<u>Informa</u> Assessi	tions related to the componen ment:	<u>t Rosin amine:</u> The substance or mixture is not classified as specific target organ toxicant, single expos	sure.	
Informa	tions related to the componen	t 1,2-Benzisothiazol-3(2H)-one:		
Assessi	ment:	The substance or mixture is not classified as target organ toxicant, single exposure.	specifi	с
Informa	tions related to the componen	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3	-one a	nd
<u>2-methy</u> Assessi	/I-2H-isothiazol-3-one(3:1): ment:	The substance or mixture is not classified as target organ toxicant, single exposure.	specifi	с
Informa Remark Informa Assessi	tions related to the components: tions related to the component ment:	<u>t product:</u> no data available <u>t Rosin amine:</u> The substance or mixture is not classified as specific target organ toxicant, repeated ex	posure	9.
Informa	tions related to the componen	t 1,2-Benzisothiazol-3(2H)-one:		
Assessi	ment:	The substance or mixture is not classified as target organ toxicant, repeated exposure.	specifi	с
Informa	tions related to the componen	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3	-one a	nd
2-methy	/I-2H-isothiazol-3-one(3:1):			
Assessi	ment:	The substance or mixture is not classified as target organ toxicant, repeated exposure.	specifi	С
Repeated	d dose toxicity			
<u>Informa</u> Remark	tions related to the product: s:	This information is not available.		
Informa	tions related to the component	t Rosin amine:		
Species	:: ::	Rat, male and female NOAEL: 107,7 mg/kg bw/day Application Route: oral (feed) Method: OECD Test Guideline 422		
<u>Informa</u> Species	tions related to the componen ::	<u>t 1,2-Benzisothiazol-3(2H)-one:</u> Dog, male and female NOAEL: 5 mg/kg LOAEL: 20 mg/kg Application Route: oral (gavage) Exposure time: 90 d Number of exposures: daily		

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Dose: 5 - 20 - 50 mg/kg Group: yes Method: 88/302/EC GLP: yes

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

Species:

Rat, male and female NOAEL: 16,3 - 24,7 mg/kg ApplicationRoute: Drinking water Exposure time: 90 d Number of exposures: daily Dose: 25 - 75 - 225 ppm Group: yes Method: Other GLP: yes

Aspiration toxicity

Informations related to the product:

no data available

Informations related to the component Rosin amine: No aspiration toxicity classification

Informations related to the component 1,2-Benzisothiazol-3(2H)-one:

No aspiration toxicity classification

Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): No aspiration toxicity classification

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Informations related to the product:	
Toxicity to fish:	Remarks: no data available
Toxicity to daphnia and other aquatic invertebrates:	Remarks: no data available
Toxicity to algae:	Remarks: no data available
Toxicity to fish (Chronic toxicity):	Remarks: no data available
Toxicity to microorganisms:	Remarks: no data available
Informations related to the componen	t Rosin amine:
Toxicity to fish:	LC50 (Brachydanio rerio (zebrafish)): 0,66 mg/l Exposure time: 96 h
	Method: OECD Test Guideline 203
	Remarks: WAF (Water accommodated fraction)
Toxicity to daphnia and other	
aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 0,23 mg/l Exposure time: 48 h
	Method: OECD Test Guideline 202
	Remarks: WAF (Water accommodated fraction)
Toxicity to algae/aquatic plants:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0,071 mg/l
	Exposure time: 72 h
	Method: OECD Test Guideline 201
	Remarks: WAF (Water accommodated fraction)
	NOEC (Pseudokirchneriella subcapitata (green algae)): 0,011 mg/l
	Exposure time: 72 n

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	Method: OECD Test Guideline 201 Remarks: WAF (Water accommodated fraction)
M-Factor	``´´´
(Acute aquatic toxicity): Toxicity to microorganisms:	10 Remarks: no data available
(Chronic toxicity):	Remarks: no data available
aquatic invertebrates (Chronic toxicity): M-Factor	Remarks: no data available
(Chronic aquatic toxicity):	
M-Factor (Acute aquatic toxicity):	1
Ecotoxicology Assessment Acute aquatic toxicity: Chronic aquatic toxicity:	Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Informations related to the componen Toxicity to fish :	t 1,2-Benzisothiazol-3(2H)-one: LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes
	LC50 (Cyprinodon variegatus (sheepshead minnow)): approx.16,7 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: No information available. GLP: yes
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 2,94 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
	EC0 (Daphnia magna (Water flea)): 0,643 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
	EC50 (Mysidopsis bahia (opossum shrimp)): 0,9893 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water
	NOEC (Mysidopsis bahia (opossum shrimp)): 0,25 mg/l Exposure time: 96 h Test Type: static test

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Toxicity to algae:	Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water EC50 (Selenastrum capricornutum (green algae)): 0,155 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
	NOEC (Selenastrum capricornutum (green algae)): 0,055 mg/l End point: Growth rate Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
M-Factor	1
Toxicity to microorganisms:	 EC50 (activated sludge of a predominantly domestic sewage): 23 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Analytical monitoring: no Method: OECD Test Guideline 209 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
	EC50: > 811,5 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
	NOEC: 263,7 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
Toxicity to fish	
(Chronic toxicity):	NOEC: 0,21 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Analytical monitoring: yes Method: OECD Test Guideline 215 GLP: yes
Toxicity to daphnia and other	,
aquatic invertebrates	
(Chronic toxicity):	NOEC: 1,2 mg/l End point: Reproduction rate

	Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes
	NOEC: 1,9 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes
l oxicity to soil dwelling organisms:	Test Type: artificial soil LC50: > 410,6 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
	Test Type: artificial soil NOEC: 234,5 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
Plant toxicity:	EC50: 340 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
	NOEC: 90 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
	EC50: 300 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP: yes

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Tradename:	CULR [™] Art Pigmen [™]	t for Epoxy – Leaf Green	page 19/25
		Remarks: The details of the toxic effect rela nominal concentration.	ate to the
		NOEC: 51 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect rela- nominal concentration.	ate to the
Sedim	ent toxicity:	Remarks: not available	
Ecotox Acı Chı	ite aquatic toxicity: onic aquatic toxicity:	Very toxic to aquatic life. Toxic to aquatic life with long lasting effects	S.
Inform 2 meth	ations related to the component	nt mixture of: 5-chloro-2-methyl-2H-isothiazo	I-3-one and
Toxicit	y to fish:	EC50 (Oncorhynchus mykiss (rainbow trou Exposure time: 96 h Method: OECD Test Guideline 203	ıt)): 0,22 mg/l
Toxicit aqu	y to daphnia and other atic invertebrates:	EC50 (Daphnia magna (Water flea)): 0,1 m Exposure time: 48 h Method: OECD Test Guideline 202	ıg/l
loxicit	y to algae:	EC50 (Skeletonema costatum (marine diat 0,0052 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 201	om)):
		NOEC (Skeletonema costatum (marine dia 0,00049 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 201	ıtom)):
M-Fac (Ac	tor ute aquatic toxicity):	100	
Toxicit	y to microorganisms:	EC50 (activated sludge): 7,92 mg/l Exposure time: 3 h Method: OECD Test Guideline 209	
Toxicit (Ch	y to fish ironic toxicity):	NOEC: 0,098 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow tr Method: OECD Test Guideline 215	rout)
Toxicit aqı (Ch	y to daphnia and other latic invertebrates lronic toxicity):	NOEC: 0,004 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202	
M-Fac (Ch Toxicit	tor ironic aquatic toxicity): y to soil dwelling	10	
org	anisms:	LC50: 86,6 mg/kg dry weight (d.w.) Exposure time: 14 d	

				p
		Species: Eisenia Method: OECD	a fetida (earthworms) Test Guideline 207	
		NOEC: 8,83 mg Exposure time: Species: Eisenia OECD Test Guid	/kg dry weight (d.w.) 14 d a fetida (earthworms) deline 207	
Ecotoxicolog Acute aqu Chronic a	y Assessment latic toxicity: quatic toxicity:	Very toxic to aqu Very toxic to aqu	uatic life. uatic life with long lasting effe	ects.
12.2. Persistence a Informations	nd degradability related to the product:			
Biodegradabi	ility:	no data available	e	
<u>Informations</u> Biodegradabi	<u>related to the component</u> ility:	Rosin amine: Test Type: aerol Inoculum: activa Result: Not read Biodegradation: Exposure time: 2 Method: OECD	bic ated sludge Jily biodegradable. 9 % 28 d Test Guideline 301B	
<u>Informations</u> Biodegradabi	<u>related to the component</u> ility:	1,2-Benzisothia: Test Type: aero Inoculum: activa Concentration: 1 Result: Partially Exposure time: 0 Method: OECD GLP: yes	<u>zol-3(2H)-one:</u> bic ated sludge 1 mg/l biodegradable. 63 d Test Guideline 301C	
Physico-cher Stability in wa	nical removability: ater:	Remarks: Biode Test Type: abiot Degradation hal pH: 4 Hydrolysis: at 50 Method: OECD GLP: yes	gradable tic f life: 219 d 0 °C Test Guideline 111	
		Test Type: abiot Degradation hal pH: 7 Hydrolysis: at 50 Method: OECD GLP: yes	tic f life: > 200 d 0 °C Test Guideline 111	
		Test Type: abiot Degradation hal pH: 9 Hydrolysis: at 50 Method: OECD GLP: yes	tic f life: 145 d) °C Test Guideline 111	
Photodegrad	ation:	Test Type: wate Light source: Xe Light spectrum: Degradation (dir GLP: yes Test Type: air Method: calcular	er enon lamp 290 - 400 nm rect photolysis): < 1,5 % ted	

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		GLP: no Remarks: Decomposes rapidly in contact v	with light.
	Informations related to the component	nt mixture of: 5-chloro-2-methyl-2H-isothiazo	I-3-one and
	<u>2-methyl-2H-isothiazol-3-one(3:1):</u> Biodegradability:	Test Type: aerobic Inoculum: activated sludge	
	Photodegradation:	Method: OECD Test Guideline 301B Test Type: water Light source: Sunlight	
12.3.	Bioaccumulative potential Informations related to the product:		
	Bioaccumulation:	no data available	
	Informations related to the component Bioaccumulation:	<u>nt Rosin amine:</u> Remarks: no data available	
	Informations related to the company	at 1.2 Penziesthiezel 2/2H) ener	
	Bioaccumulation:	Species: Lepomis macrochirus (Bluegill su Exposure time: 56 d Concentration: 0,1 mg/l Bioconcentration factor (BCF): 6,62 Method: OECD Test Guideline 305 GLP: no Remarks: Due to the distribution coefficien n-octanol/water,accumulation in organis not expected.	infish) it sms is
	Informations related to the componer 2-methyl-2H-isothiazol-3-one(3:1):	nt mixture of: 5-chloro-2-methyl-2H-isothiazo	I-3-one and
	Bioaccumulation:	Bioconcentration factor (BCF): 3,6 Method: calculated Remarks: Does not accumulate in organis	ms.
	Partition coefficient n-octanol/water:	o log Pow: -0,71 - 0,75 Method: OECD Test Guideline 107	
12.4.	Mobility in soil Informations related to the component	nt Rosin amine:	
	Distribution among environmental compartments:	adsorption Medium: water – soil Remarks: The product is insoluble and floa	ats on water.
	Informations related to the component	nt 1,2-Benzisothiazol-3(2H)-one:	
	Distribution among environmental compartments:	Adsorption/Soil Medium: water – soil Koc: 235 – 566 Method: Other	
12.5.	Results of PBT and vPvB assessme	ent	
-	Informations related to the product:		
	This substance/mixture contains no object to bioaccumulative and toxic (PBT), or of 0,1 % or higher.	components considered to be either persiste very persistent and very bioaccumulative (vF	nt, PvB) at levels
	Informations related to the component	nt Rosin amine:	

informations related the component Rosin amine:

Assessment:

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

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	Informations related to the componer	<u>nt 1,2-Benzisothiazol-3(2H)-one:</u>
	Assessment:	The substance is not identified as a PBT or as a vPvB substance.
	Informations related to the componer 2-methyl-2H-isothiazol-3-one(3:1):	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	Assessment:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
12.6.	Other adverse effects	
	Informations related to the product:	
	Environmental fate and pathways:	no data available
	Additional ecological information:	no data available
	Informations related to the componer	nt Rosin amine:
	Environmental fate and pathways:	no data available
	Additional ecological information:	The product should not be allowed to enter drains, water courses or the soil.
	Informations related to the componer	nt 1,2-Benzisothiazol-3(2H)-one:
	Environmental fate andpathways:	not available
	Additional ecological information:	Do not allow to enter ground water, waterways or waste water.
	Informations related to the componer 2-methyl-2H-isothiazol-3-one(3:1):	nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	Additional ecological information:	The product should not be allowed to enter drains, watercourses or the soil.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product:

Dispose of in accordance with the European Directives on waste and hazardous waste.

Uncleaned packaging:

This material and its container must be disposed of in a safe way.

SECTION 14: TRANSPORT INFORMATION

14.1. to 14.5.

ADR:	not restricted
ADN:	not restricted
RID:	not restricted
IATA:	not restricted
IMDG:	not restricted

- 14.6. Special precautions for users See sections 6 to 8 of this Safety Data Sheet.
- **14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** No transport as bulk according IBC-Code.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of

Very High Concern for Authorisation (Article 59):	Not applicable
REACH - List of substances subject to authorisation	
(Annex XIV):	Not applicable

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Regulation (EC) No 1005/2009 on substances that	
deplete the ozone layer:	Not applicable
Regulation (EC) No 850/2004 on persistent	
organic pollutants:	Not applicable

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

15.2. Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

SECTION 16: OTHER INFORMATION

Observe the legal requirements nationally and locally.

List of the text of the hazard statements mentioned section 3 (H-phrases):

	· ·
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.:	Acute toxicity
Aquatic Acute:	Short-term (acute) aquatic hazard
Aquatic Chronic:	Long-term (chronic) aquatic hazard
Eye Dam.:	Serious eye damage
Skin Corr.:	Skin corrosion
Skin Irrit.:	Skin irritation
Skin Sens.:	Skin sensitisation
STOT RE:	Specific target organ toxicity - repeated exposure

Change compared to the previous version:

Change in the composition

Legend

ADN	European Agreement concerning the International Carriage of
	Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of
	Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ASTM	American Society for the Testing of Materials
bw	Body weight
CLP	Classification Labelling Packaging Regulation
	Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DIN	Standard of the German Institute for Standardisation
DMEL	Derived Minimal Effect Level (genotoxic substances)
DNEL	Derived No Effect Level
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC-Number	European Community number

ECxConcentration associated with x% responseELxLoading rate associated with x% responseEmsEmergency ScheduleENCSExisting and New Chemical Substances (Japan)ErCxConcentration associated with x% growth rate responseGHSGlobally Harmonized SystemGLPGood Laboratory PracticeIARCInternational Agency for Research on CancerIATAInternational Air Transport AssociationIBCInternational Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in BulkICS0Half maximal inhibitory concentrationICAOInternational Civil Aviation OrganizationIECSCInventory of Existing Chemical Substances in ChinaIMDGInternational Maritime Drangerous GoodsIMOInternational Maritime OrganizationISOInternational Organisation for StandardizationKECIKorea Existing Chemicals InventoryLCS0Lethal Docentration to 50 % of a test populationLCS0Lethal Concentration for the Prevention of Pollution from Ships n.o.s.n.o.s.Nol Otherwise SpecifiedNO(A)ELCNo Observed (Adverse) Effect ConcentrationNO(A)ELNo Observed (Exit on Adverse) Effect LowelNOCNow Zealand Inventory of ChemicalsNEACNegulations concerning the International Substances(Q)SAR(Quantitative) Structure Activity RelationshipREACHRegulation (CC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemical	Tradename:	CULR [™] Art Pigment for Epoxy – Leaf Green	age	24/25
ELx Loading rate associated with x% response EmCS Emergency Schedule ENCS Existing and New Chemical Substances (Japan) ErCx Concentration associated with x% growth rate response GHS Globally Harmonized System GLP Good Laboratory Practice IARC International Air Transport Association IBC International Air Transport Association	ECx	Concentration associated with x% response		
EmSEmergency ScheduleENCSExisting and New Chemical Substances (Japan)ErCxConcentration associated with % growth rate responseGHSGlobally Harmonized SystemGLPGood Laboratory PracticeIARCInternational Agency for Research on CancerIATAInternational Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in BulkICS0Half maximal inhibitory concentrationICA0International Civil Aviation OrganizationIECSCInventory of Existing Chemical Substances in ChinaIMDGInternational Maritime Dangerous GoodsIMOInternational Maritime OrganizationISA1Industrial Safety and Health Law (Japan)ISOInternational Organisation for StandardizationKECIKorea Existing Chemicals InventoryLCS0Lethal Dose to 50% of a test populationLD50Lethal Dose to 50% of a test populationLD50Lethal Dose to 50% of a test populationLD51No Observed (Adverse) Effect ConcentrationNO(A)ECNo Observed (Adverse) Effect Loading RateNO(A)ECNo Observed (Effect Loading RateNZIOCNew Zealand Inventory of Chemicals and Chemical Substances(QISAR(Quantitative) Structure Activity RelationshipREACHRegulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of ChemicalsRD6Safety Data SheetCS0Safety Data SheetRIDRegulations concerning the International	ELx	Loading rate associated with x% response		
ENCSExisting and New Chemical Substances (Japan)ErCxConcentration associated with x% growth rate responseGHSGlobally Harmonized SystemGLPGood Laboratory PracticeIARCInternational Agency for Research on CancerIATAInternational Air Transport AssociationIBCInternational Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in BulkICS0Half maximal inhibitory concentrationICAOInternational Code for the Construction and Equipment of Ships carrying Oragerous Chemicals in BulkIECS2Inventory of Existing Chemical Substances in ChinaIMDGInternational Maritime Dangerous GoodsIMOInternational OrganizationISNInternational Organization for StandardizationKECIKorea Existing Chemicals InventoryLCS0Lethal Concentration to 50 % of a test populationLD50Lethal Concentration to 50 % of a test populationLD50Lethal Dose to 50% of a test populationNO(A)ECNo Observed (Adverse) Effect ConcentrationNO(A)ECNo Observed (Adverse) Effect LevelNOELRNo Observed (Adverse) Effect LevelNOELRNo Observed Chemicals and Chemical SubstancePICCSPhilippines Inventory of Chemicals and Chemical SubstanceQEDOrganization for Economic Co-operation and DevelopmentOPPTSOffice of Chemicals affety and Pollution PreventionPBTPersistent, Bioaccumulative and Toxis substanceQICSPhilippines Inventory of Chemicals and Chemical Substances	EmS	Emergency Schedule		
ErCxConcentration associated with x% growth rate responseGHSGlobally Harmonized SystemGLPGood Laboratory PracticeIARCInternational Agency for Research on CancerIATAInternational Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in BulkICS0Half maximal inhibitory concentrationIACAInternational Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in BulkICS0Half maximal inhibitory concentrationIACAInternational Civil Aviation OrganizationIECSCInventory of Existing Chemical Substances in ChinaIMDGInternational Maritime Dangerous GoodsIMOInternational Maritime OrganizationISOInternational Maritime OrganizationISOInternational Organisation for StandardizationKECIKorea Existing Chemicals InventoryLC50Lethal Concentration to 50 % of a test populationLD50Lethal Concentration for the Prevention of Pollution from Shipsn.o.s.Not Otherwise SpecifiedNO(A)ECNo Observed (Adverse) Effect ConcentrationNO(A)ELNo Observed Effect Loading RateNOELRNo Observable Effect Loading RateNDELPersistent, Bioaccumulative and Toxic substancePICSCPhilippines Inventory of Chemicals and Chemical Substances(Q)SAR(Quantitative) Structure Activity RelationshipREACHRegulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals	ENCS	Existing and New Chemical Substances (Japan)		
GHS Globally Harmonized System GLP Good Laboratory Practice IARC International Agency for Research on Cancer IATA International Adency for Research on Cancer IATA International Adency for Research on Cancer IATA International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk ICS0 ICS0 Half maximal inhibitory concentration ICAO International Civil Aviation Organization IECSC Inventory of Existing Chemical Substances in China IMDG International Maritime Organization ISO International Organisation for Standardization ISO International Organisation for Standardization KECI Korea Existing Chemicals Inventory LC50 Lethal Concentration to 50 % of a test population LD50 Lethal Concentration for the Prevention of Pollution from Ships n.o.s. Not Otherwise Specified NO(A)EC No Observed (Adverse) Effect Concentration NO(A)EL No Observable Effect Level NOELR No Observable Effect Lavel NOELR No Observable Effect Lavel NOELR No Observab	ErCx	Concentration associated with x% growth rate response		
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vPvB Very Persistent and Very Bioaccumulative	UN	United Nations		
	vPvB	Very Persistent and Very Bioaccumulative		

Decimal notation: "thousands" places are identified with a dot (for example, "2.000 mg/kg" means "two thousand mg/kg"). Decimal places are identified with a comma (for example, "1,35 g/cm³" means "one point three five g/cm³").

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Easy Composites Ltd makes no warranties, express or implied, as to the information accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Easy Composites Ltd products for its particular application. Nothing included in this information waives any of Easy Composites Ltd 's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing.

Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Easy Composites Ltd products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products.

For additional information, please contact Easy Composites Ltd.

SAFETY DATA SHEET

in acc. with Regulation (EU) No. 2015/830



Revision Date: 04/02/2019

CULR[™] Art Pigment for Epoxy – Tangy Yellow Tradename: page 1/11

SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier

Tradename:	CULR™ Art Pigment for Epoxy – Tangy Yellow
Chemical	C Dismont Valley, 72, Valley, 74 and Calainmouth and in assess
characterisation:	dispersion, contenting Polyglykol and 1,2-Propandiol.

1.2. Relevant identified uses of the substance or mixture and uses advised again

<u>uses of the substance or mixture:</u>
Industrial Performance Chemicals
Paints, lacquers and varnishes industry
Polymers industry
Printing Inks Industry
Colourant preparation

1.3. Details of the supplier of the safety data sheet

Identification of the company: Easy Composites Ltd Unit 39 Park Hall Business Village Stoke on Trent, ST3 5XA. United Kingdom. Phone: +44 (0)1782 454499

Information to substance / mixture:

Division: Technical

technical@glasscastresin.com E-mail:

1.4. Emergency telephone number

Emergency CONTACT (Office Hours) Phone: +44 (0)1782 454499

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance / mixture

Classification according CLP regulation (Regulation (EC) No. 1272/2008, as amended):

Categoryof danger	Category HazardSymbol	H-Phrases

Not a hazardous substance or mixture.

2.2. Label elements

Labelling according CLP regulation (Regulation (EC) No. 1272/2008, as amended): Not a hazardous substance or mixture.

Additional Labelling:

EUH 208 contains mixture of:	1,2-Benzisothiazol-3(2H)-one, mixture of: 5-chloro-2-methyl-2H-isothiazol-3-on and 2-methyl-2H-isothiazol-3-one(3:1).	
	May produce an allergic reaction.	
EUH210:	Safety data sheet available on request.	

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0,1 % or higher.

No hazards to be specially mentioned.

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SECTION 3: COMPOSITION / INFORMATION TO INGREDIENTS

3.1. Mixtures

Hazardous ingredients:

Alcohols, C16-18 and C18-unsaturated, ethoxylated (8 EO)

Concentration:	≥ 8,5 - ≤ 14,5 %
CAS-Number:	68920-66-1
EC-Number:	500-236-9

GHS classification EC:

Skin irritation	Category 2	H315
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 3	H412
M-Factor (Acute aquatic toxicity) 1		

Rosin amine

Concentration:	≥ 0,1 - ≤ 0,25 %
CAS-Number:	61790-47-4
EC-Number:	263-139-8
Registrationnumber:	01-2120780340-61-XXXX

GHS classification EC:

Acute toxicity	Category 4	H302
Skin irritation	Category 2	H315
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Aquatic chronic	Category 1	H410
M-Factor (Acute aquatic toxicity)		10
M-Factor (Chronic aquatic toxicity)		1

1,2-Benzisothiazolin-3-on

0,0025 - ≤ 0,025 %
34-33-5
20-120-9
3-088-00-6
-2120761540-60

GHS classification EC:

Acute toxicity	Category 4	H302
Fatal ifinhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an alergic skin reaction	Category 1	H317
Serious eye damage	Category 1	H318
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 2	H411

Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1)

Concentration:	≥ 0,0002 - ≤ 0,0015 %
CAS-Number:	55965-84-9
EC-Number:	611-341-5
INDEX-No.:	613-167-005
Registrationnumber:	01-2120764691-48

GHS classification EC:

Acute toxicity	Category 3	H301
Acute toxocity	Category 2	H310
Fatal ifinhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314

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May cause an alergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category1	H410

The text of H-phrases is shown in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Discription of first aid measures

General information:

Get medical advice/ attention if you feel unwell.

After inhalation:

Move the victim to fresh air.

If you feel unwell, seek medical advice (show the label where possible).

After contact with skin:

In case of contact with skin, clean with plenty of soap and water.

After contact with eyes:

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion:

If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed symptoms

<u>Symptoms:</u> None known. <u>Hazards:</u>

None known.

4.3. Indication of any immediate medical attention and special treatment needed Treatment:

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray jet Dry powder Carbon dioxide (CO₂) Alcohol resistant foam

Extinguishing media that must not be used for safety reasons: High volume water jet

5.2. Special hazards arising from the substance or mixture

In case of fires, hazardous combustion gases are formed: Carbon oxides (CO_x) Nitrogen oxides (NO_x) Hydrogen chloride

5.3. Advice for firefighters

<u>Special protective equipment for firefighting:</u> Use self-contained breathing apparatus.

<u>Further information:</u> Wear suitable protective equipment.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures Wear suitable personal protective equipment.

6.2. Environment precautions The product should not be allowed to enter drains, water courses or the soil.

- 6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Treat recovered material as described in the section "Disposal considerations".
- 6.4. Reference to other sections
 <u>Additional information:</u>
 Information regarding safe handling, see chapter 7.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

 <u>Advice on safe handling:</u>
 When used and handled appropriately no special measures are needed.
 <u>Hygiene measures:</u>
 Wash hands before breaks and at the end of workday.
 Use protective skin cream before handling the product.
 Take off immediately all contaminated clothing and wash it before reuse.

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

7.2. Conditions for safe storage, including any incompatibilities

<u>Further information on storage conditions:</u> Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Keep away from flames and sparks.

<u>Storage stability:</u> Minimum 36 months.

7.3. Specific end use(s)

No further recommendations.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Exposure limit values: Exposure limit values are not available.

DNEL / DMEL-values:

C.I. Pigment Yellow 74 EC-Number: 228-768-4 CAS-Number: 6358-31-2

Route of exposure	End use	Potential health effects	Value	Remarks
Dermal	Workers	Long-term systemic effects	42 mg/kg bw/day	
Inhalation	Workers	Long-term systemic effects	49 mg/m ³	

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Inhalation	Workers	Long-term local effects	3 mg/m ³
Dermal	General	Long-term	25 mg/kg
	Population	systemic effects	bw/day
Oral	General	Long-term	25 mg/kg
	Population	systemic effects	bw/day

1,2-Benzisothiazol-3(2H)-one EC-Number: 220-120-9 CAS-Number: 2634-33-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term systemic effects	6,81 mg/m ³	DNEL
Dermal	Workers	Long-term systemic effects	0,966 mg/kg bw/day	DNEL
Inhalation	Consumers	Long-term systemic effects	1,2 mg/m ³	DNEL
Dermal	Consumers	Long-term systemic effects	0,345 mg/kg bw/dav	DNEL

Silica, amorphous, fumed, crystalline free EC-Number: 601-216-3

CAS-Number: 112945-52-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	4 mg/m ³	DNEL

Glycerine

EC-Number: 200-289-5 CAS-Number: 56-81-5

Route of exposure	End use	Potential health effects	Value	Remarks
Inhalation	Workers	Long-term local effects	56 mg/m ³	DNEL
Inhalation	General population	Long-term local effects	33 mg/m ³	DNEL
Ingestion	General population	Long-term systemic effects	229 mg/kg bw/day	DNEL

PNEC-values:

Silica, amorphous, fumed, crystalline free EC-Number: 601-216-3 CAS-Number: 112945-52-5

Environmental compartment	Value
Secondary poisoning	60.000 mg/kg (food)

Glycerine

enjeenne	
EC-Number:	200-289-5
CAS-Number:	56-81-5

Environmental compartment	Value
Fresh water	0,885 mg/l
Marine water	0,088 mg/l
Sewage treatment plant	1000 mg/l

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Fresh water sediment	3,33 mg/kg dry weight (d.w.)
Marine sediment	0,33 mg/kg dry weight (d.w.)
Soil	0,141 mg/kg dry weight (d.w.)

1,2-Benzisothiazol-3(2H)-one EC-Number: 220-120-9 CAS-Number: 2634-33-5

Environmental compartment	Value
Fresh water	0,00403 mg/l
Marine water	0,000403 mg/l
Intermittend use/release	0,0011 mg/l
Sewage treatment plant	1,03 mg/l
Fresh water sediment	0,0499 mg/kg dry weight (d.w.)
Marine sediment	0,00499 mg/kg dry weight (d.w.)
Soil	3 mg/kg dry weight (d.w.)

Mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) EC-Number: 611-341-5

CAS-Number: 55965-84-9

Environmental compartment	Value
Fresh water	0,049 µg/l
Marine water	0,0098 µg/l
Sewage treatment plant	0,045 μg/l
Soil	0,009 µg/l

8.2. Exposure controls

Appropriate engineering controls:

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

General protective measures:

Wear suitable protective equipment.

Respiratory protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection:

Nitrile rubber

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection: Safety glasses

Body protection: Wear suitable protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Form:	liquid
Colour:	yellow
Odour:	not significant
Odour threshold:	not required
pH value:	not measured
Melting point:	not applicable
Boiling point:	approx. 100 °C
Flash point:	> 100 °C

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Evaporation rate: Flammability: Lower explosion limit:	not determined not determined not determined
Upper explosive limit: Combustion number:	not determined not applicable
Minimum ignition energy:	not determined
Vapour pressure:	not determined
Vapour density relative to air:	not determined
Relative Density:	no data available
Solubility in water:	miscible
Octanol/ water partition coefficient (log Pow):	not determined
Ignition temperature:	not determined
Thermal decomposition:	> 100 °C
Viscosity (dynamic):	not tested
Oxidizing properties:	no data available
Other information	
Density:	1,22 g/cm³ (20 °C)

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

9.2.

No dangerous reaction known under conditions of normal use.

- **10.2. Chemical Stability** Stable under normal conditions.
- **10.3.** Possibility of hazardous reactions No dangerous reaction known under conditions of normal use. Stable.
- **10.4. Conditions to avoid** None known.
- **10.5.** Incompatible Materials No data available.
- **10.6. Hazardous decomposition products** No decomposition if stored and applied as directed.

SECTION 11: TOXICOLOGIC INFORMATION

11.1. Information on toxicological effects Acute toxicity

Informations related to the product:	
Acute oral toxicity:	Remarks: no data available
Acute inhalation toxicity:	Remarks: no data available
Acute dermal toxicity:	Remarks: no data available
Informations related to the compone	ent Rosin amine:
Acute oral toxicity:	LD50 (Rat, male and female): 300 - 2.000 mg/kg
	Method: OECD Test Guideline 423
	Assessment: The component/mixture is moderately toxic after single ingestion.
Acute inhalation toxicity:	Remarks: no data available
Acute dermal toxicity:	LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal toxicity Remarks: Not applicable Informations related to the component 1,2-Benzisothiazol-3(2H)-one: LD50 (Rat, male and female): 670 - 784 mg/kg Acute oral toxicity: Method: OECD Test Guideline 401 GLP: yes Acute inhalation toxicity: LC50 (Rat, male and female): 0,5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OPPTS 870.1300 GLP: yes LD50 (Rat, male and female): > 2.000 mg/kg Acute dermal toxicity: GLP: yes Assessment: The substance or mixture has no acute dermal toxicity. Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1): Acute oral toxicity: LD50 (Rat): 64 mg/kg LC50 (Rat, male and female): 0,171 mg/l Acute inhalation toxicity: Exposure time: 4 h Test atmosphere: dust/mist Acute dermal toxicity: LD50 (Rabbit): 92,4 mg/kg Skin corrosion/irritation Informations related to the product: Species: Rabbit Method: OECD Test Guideline 404 Result: No skin irritation Remarks: The toxicological data has been taken from products of similar composition. Informations related to the component Rosin amine: In Vitro Membrane Barrier Test Method for Species: Skin Corrosion – CORROSITEX Method: OECD Test Guideline 431 Result: Irritating to skin. Informations related to the component Alcohols, C16-18 and C18-unsaturated, ethoxylated: Result: Irritating to skin. Informations related to the component 1,2-Benzisothiazol-3(2H)-one: Species: Rabbit Exposure time: 4 h Result: Irritating to skin. GLP:ves Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): Species: Rabbit Result:Causes burns. Serious eye damage/eye irritation Informations related to the product: Species: rabbit eve Method: OECD Test Guideline 405

Result: No eye irritation

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	Remarks: The toxicological data has been taken from products of similar composition.
Informations related to the component	t Rosin amine:
Method:	OECD Test Guideline 437 Result: Risk of serious damage to eyes.
Informations related to the component	t 1,2-Benzisothiazol-3(2H)-one:
Species:	rabbit eye
	Exposure time: 2,9 h - 11 d
	Result:Risk of serious damage to eyes. GLP: yes
Informations related to the componen	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>2-methyl-2H-isothiazol-3-one(3:1):</u>	
Species:	rabbit eye
	Result: Risk of serious damage to eyes.
Respiratory or skin sensitisation	
Informations related to the product:	
Remarks:	no data available
Informations related to the componen	t Rosin amine:
Test Type:	Mouse local lymphnode assav
	Exposure routes: Skin contact
	Species: Mouse
	Result: The product is a skin sensitiser,
	sub-category 1A.
Informations related to the component	t 1,2-Benzisothiazol-3(2H)-one:
Test Type:	Guinea pig maximization test
	Exposure routes: Dermal
Species:	Guinea pig
	Method: Other
	Result: May cause sensitisation by skin contact.
	GLF. yes
Informations related to the component methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-
Species:	Guinea pig
	Method: Other Result: The product is a skip consition
	sub-category 14
	Assessment: Toxic if swallowed.
	Fatal in contact with skin,
	Fatal ifinhaled,
	Causes severe skin burns and eye damage.
	May cause an allergic skin reaction.
Germ cell mutagenicity	
Informations related to the product:	
Genotoxicity in vitro:	Remarks: no data available
Germ cell mutagenicity-	
Assessment:	No information available.
Informations related to the componen	t Rosin amine <u>:</u>
Genotoxicity in vitro:	Test Type: Ames test
-	Result: negative
Germ cell mutagenicity-	
Assessment:	In vitro tests did not show mutagenic effects

Genotoxicity in vitro:	Test Type: Mouse lymphoma assay
	Concentration: $0,1 - 12,8 \ \mu g/ml$
Metabolic activation:	
with and without metabolic	
activation:	Method: OECD Test Guideline 476
	CLP: ves
	Test Type: Ames test
	Test system: Salmonella typhimurium
	Concentration: 0,064 - 200 μg/plate
Metabolic activation:	
with and without metabolic	Mathad: OECD Tast Cuidaling 471
	Result: negative
	GLP: yes
	Test Type: Chromosome aberration test in vitro
	Test system: Human lymphocytes
	Concentration: 1 - 40 µg/ml
Metabolic activation:	
activation:	Method: OECD Test Guideline 473
	Result: positive
	GLP: yes
Genotoxicity in vivo:	Test Type: Other
	Species: Rat (male)
	Strain: Wistar Cell type: Liver cells
	Application Route: Ingestion
	Exposure time: single dose
	Dose: 560 - 1400 mg/kg
	Method: OECD Test Guideline 486
	Result: negative
	Lest Type: Micronucleus test
	Species. Mouse (male and lemale) Strain: CD1
	Cell type: Bone marrow
	Application Route: Ingestion
	Exposure time: single dose
	Dose: 125-250-500-1000-2000-5000mg/kg
	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative
	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes
Germ cell mutagenicity-	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes
Germ cell mutagenicity- Assessment:	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes Did not show mutagenic effects in animal experiments
Germ cell mutagenicity- Assessment: <u>nformations related to the compone</u>	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes Did not show mutagenic effects in animal experiments nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Germ cell mutagenicity- Assessment: <u>nformations related to the compone</u> <u>2-methyl-2H-isothiazol-3-one(3:1):</u>	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes Did not show mutagenic effects in animal experiments <u>nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u>
Germ cell mutagenicity- Assessment: Informations related to the componel 2-methyl-2H-isothiazol-3-one(3:1): Genotoxicity in vitro:	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes Did not show mutagenic effects in animal experiments <u>nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> Test Type: In vitro study
Germ cell mutagenicity- Assessment: <u>Informations related to the components</u> <u>2-methyl-2H-isothiazol-3-one(3:1):</u> Genotoxicity in vitro: Vetabolic activation:	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes Did not show mutagenic effects in animal experiments <u>nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> Test Type: In vitro study
Germ cell mutagenicity- Assessment: <u>Informations related to the component</u> <u>2-methyl-2H-isothiazol-3-one(3:1):</u> Genotoxicity in vitro: Vetabolic activation: with and without metabolic	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes Did not show mutagenic effects in animal experiments <u>nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> Test Type: In vitro study
Germ cell mutagenicity- Assessment: <u>Informations related to the components</u> <u>2-methyl-2H-isothiazol-3-one(3:1):</u> Genotoxicity in vitro: Metabolic activation: with and without metabolic activation:	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes Did not show mutagenic effects in animal experiments <u>nt mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> Test Type: In vitro study Result: Conflicting results have been seen in different studies.
Germ cell mutagenicity- Assessment: Informations related to the component 2-methyl-2H-isothiazol-3-one(3:1): Genotoxicity in vitro: Metabolic activation: with and without metabolic activation: Genotoxicity in vivo:	Dose: 125-250-500-1000-2000-5000mg/kg Method: OECD Test Guideline 474 Result: negative GLP: yes Did not show mutagenic effects in animal experiments <u>int mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> Test Type: In vitro study Result: Conflicting results have been seen in different studies. Test Type: Micronucleus test Species: Rat

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	Application Route: Oral Exposure time: $\leq 5 d$ Dose: 1-5 x $\leq 28 mg/kg$ Result: negative
	Test Type: Micronucleus test Species: Mouse Application Route: Oral Exposure time: $\leq 5 d$ Dose: 1-5 x $\leq 20 - 30 mg/kg$ Result: negative
Germ cell mutagenicity- Assessment:	In vivo tests did not show mutagenic effects
Carcinogenicity Informations related to the product: Carcinogenicity - Assessment: Informations related to the component	No information available. <u>Rosin amine:</u>
Carcinogenicity – Assessment:	No information available.
Informations related to the component	: 1,2-Benzisothiazol-3(2H)-one:
Assessment:	Not applicable
Informations related to the component <u>2-methyl-2H-isothiazol-3-one(3:1):</u> Carcinogenicity - Assessment:	<u>mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and</u> No evidence of carcinogenicity in animal studies.
Reproductive toxicity <u>Informations related to the product:</u> Reproductive toxicity - Assessment:	No information available.
Informations related to the component	Rosin amine:
Reproductive toxicity – Assessment:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.
Informations related to the component Effects on fertility:	 <u>1,2-Benzisothiazol-3(2H)-one:</u> Species: Rat, male Application Route: oral (fed) Dose: 18,5 - 97,8 mg/kg General Toxicity - Parent: NOAEL: 18,5 mg/kg body weight General Toxicity F1: NOAEL: 48 mg/kg body weight Method: Other GLP: yes Species: Rat, female Application Route: oral (feed) Dose: 27,0 - 114,8 mg/kg General Toxicity - Parent: NOAEL: 27 mg/kg body weight
	Method: Other GLP: yes

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Effects on foetal development:	Species: Rat, female Application Route: oral (gavage) Dose: 10 - 40 - 100 mg/kg General Toxicity Maternal: NOAEL: 10 mg/kg body weight Teratogenicity: NOAEL: 40 mg/kg body weight Method: Directive 67/548/EEC, Annex V, B.31.
Reproductive toxicity – Assessment:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments. Embryotoxicity classification not possible from current data
Informations related to the component	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
<u>2-methyl-2H-isothiazol-3-one(3:1):</u>	
Effects on fertility:	Species: Rat, male and female Application Route: Drinking water Dose: 25 - 75 - 225 ppm General Toxicity - Parent: NOAEL: 16,3 - 24,7 mg/kg body weight General Toxicity F1: NOAEL: 16,3 - 24,7 mg/kg body weight Method: Other GLP: yes
	Species: Rat, male and female Application Route: Drinking water Dose: 30 - 100 - 300 ppm General Toxicity - Parent: NOAEL: 2,8 - 4,4 mg/kg body weight General Toxicity F1: NOAEL: 22,7 - 28 mg/kg body weight General Toxicity F2: NOAEL: 35,7 - 39,1 mg/kg body weight Method: OECD Test Guideline 416 GLP: ves
Effects on foetal development:	Species: Rat, male and female Application Route: oral (gavage) Dose: ≤ 15 mg/kg
Developmental Toxicity:	NOAEL: 15 mg/kg body weight Method: Other Species: Rat, male and female Application Route: oral (gavage) General Toxicity Maternal: NOAEL: ≤ 3,95 mg/kg body weight Mathed: Other
Reproductive toxicity – Assessment:	Weight of evidence does not support classification for reproductive toxicity Embryotoxicity classification not possible from current data.
STOT - single exposure	
Informations related to the component	t product:
Remarks:	no data available
Informations related to the component	t Rosin amine:
Assessment:	The substance or mixture is not classified as specific target organ toxicant, single exposure.

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Informations related to Assessment:	o the component 1,2-Benzisothiazol-3(2H)-one: The substance or mixture is not classified as specific
	target organ toxicant, single exposure.
Informations related to 2-methyl-2H-isothiazo	the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Assessment:	The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated expo	sure
Informations related to Remarks:	<u>o the component product:</u> no data available
Informations related to Assessment:	<u>o the component Rosin amine:</u> The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Informations related to	o the component 1,2-Benzisothiazol-3(2H)-one:
Assessment:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Informations related to	the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Assessment:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicit	y
Informations related to	o the product:
Remarks:	This information is not available.
Informations related to Species:	<u>o the component Rosin amine:</u> Rat, male and female NOAEL: 107,7 mg/kg bw/day Application Route: oral (feed) Method: OECD Test Guideline 422
Informations related to	o the component 1,2-Benzisothiazol-3(2H)-one:
Species:	Dog, male and female NOAEL: 5 mg/kg LOAEL: 20 mg/kg Application Route: oral (gavage) Exposure time: 90 d Number of exposures: daily Dose: 5 - 20 - 50 mg/kg Group: yes Method: 88/302/EC GLP: yes
Informations related to 2-methyl-2H-isothiazo	the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Species:	Rat, male and female NOAEL: 16,3 - 24,7 mg/kg ApplicationRoute: Drinking water Exposure time: 90 d Number of exposures: daily Dose: 25 - 75 - 225 ppm Group: yes Method: Other GLP: yes

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Aspiration toxicity

Informations related to the product: no data available Informations related to the component Rosin amine: No aspiration toxicity classification Informations related to the component 1,2-Benzisothiazol-3(2H)-one: No aspiration toxicity classification Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1): No aspiration toxicity classification

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Informations related to the product:	
Toxicity to fish:	Remarks: no data available
Toxicity to daphnia and other	
aquatic invertebrates:	Remarks: no data available
Toxicity to algae:	Remarks: no data available
Toxicity to fish (Chronic toxicity):	Remarks: no data available
Toxicity to microorganisms:	Remarks: no data available
Informations related to the componer	nt Rosin amine:
Toxicity to fish:	LC50 (Brachydanio rerio (zebrafish)): 0,66 mg/l
	Exposure time: 96 h
	Method: OECD Test Guideline 203
	Remarks: WAF (Water accommodated fraction)
Toxicity to daphnia and other	
aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 0,23 mg/l
	Exposure time: 48 h
	Method: OECD Test Guideline 202
	Remarks: WAF (Water accommodated fraction)
loxicity to algae/aquatic plants:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0,071 mg/l
	Exposure time: 72 h
	Method: OECD Test Guideline 201
	Remarks: WAF (Water accommodated fraction)
	NOEC (Pseudokirchneriella subcapitata (green algae)): 0,011 mg/l
	Exposure time: 72 h
	Method: OECD Test Guideline 201
	Remarks: WAF (Water accommodated fraction)
M-Factor	
(Acute aquatic toxicity):	10
Toxicity to microorganisms:	Remarks: no data available
Toxicity to fish	
(Chronic toxicity):	Remarks: no data available
Toxicity to daphnia and other	
aquatic invertebrates	
(Chronic toxicity):	Remarks: no data available
M-Factor	
(Chronic aquatic toxicity):	1
Informations related to the componer	nt Alcohols, C16-18 and C18-unsaturated, ethoxylated:
(Acute aquatic toxicity):	1

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Ecotoxicology Assessment Acute aquatic toxicity: Chronic aquatic toxicity:	Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Informations related to the component	t 1,2-Benzisothiazol-3(2H)-one:
Toxicity to fish :	LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes
	LC50 (Cyprinodon variegatus (sheepshead minnow)): approx.16,7 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: No information available. GLP: yes
Toxicity to daphnia and other aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 2,94 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202
	EC0 (Daphnia magna (Water flea)): 0,643 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
	EC50 (Mysidopsis bahia (opossum shrimp)): 0,9893 mg/ Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water
Toxicity to algae:	NOEC (Mysidopsis bahia (opossum shrimp)): 0,25 mg/l Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water EC50 (Selenastrum capricornutum (green algae)): 0,155 mg/l End point: Growth rate
	Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
	NOEC (Selenastrum capricornutum (green algae)): 0,055 mg/l End point: Growth rate

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M-Facto (Acu	or ite aquatic toxicity):	Exposure time: 72 h Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes 1	
Toxicity	to microorganisms:	 EC50 (activated sludge of a predominantly domestic sewage): 23 mg/l End point: Bacteria toxicity (respiration inhibition) Exposure time: 3 h Test Type: aquatic Analytical monitoring: no Method: OECD Test Guideline 209 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration. 	2
		EC50: > 811,5 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.	,
		NOEC: 263,7 mg/kg dry weight (d.w.) Exposure time: 28 d Test Type: Soil Analytical monitoring: yes Method: OECD 216 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.	9
Toxicity (Chi	r to fish ronic toxicity):	NOEC: 0,21 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Analytical monitoring: yes Method: OECD Test Guideline 215	
Toxicity aqua (Chi	v to daphnia and other atic invertebrates ronic toxicity):	NOEC: 1,2 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes	
		NOEC: 1,9 mg/l End point: Reproduction rate Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes	

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Toxicity to soil dwelling	
organisms:	Test Type: artificial soil LC50: > 410,6 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
	Test Type: artificial soil NOEC: 234,5 mg/kg Exposure time: 14 d End point: mortality Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
Plant toxicity:	EC50: 340 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
	NOEC: 90 mg/kg Exposure time: 20 d End point: Growth Species: Phaseolus vulgaris Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes Remarks: The details of the toxic effect relate to the nominal concentration.
	EC50: 300 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP: yes Remarks: The details of the toxic effect relate to the nominal concentration.
	NOEC: 51 mg/kg Exposure time: 19 d End point: Growth Species: Triticum aestivm (wheat) Analytical monitoring: yes Method: OECD Guide-line 208 GLP:yes

	Remarks: The details of the toxic effect relate to the
Sediment toxicity:	Remarks: not available
Ecotoxicology Assessment	
Acute aquatic toxicity:	Very toxic to aquatic life.
Chronic aquatic toxicity:	Toxic to aquatic life with long lasting effects.
Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
Toxicity to fish:	EC50 (Oncorhynchus mykiss (rainbow trout)): 0,22 mg/l
	Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other	
aquatic invertebrates:	EC50 (Daphnia magna (Water flea)): 0,1 mg/l
	Method: OECD Test Guideline 202
Toxicity to algae:	EC50 (Skeletonema costatum (marine diatom)): 0,0052 mg/l
	Exposure time: 48 h
	Lest Type: static test Method: OECD Test Guideline 201
	NOEC (Skeletonema costatum (marine diatom)):
	0,00049 mg/i Exposure time: 48 h
	Test Type: static test
	Method: OECD Test Guideline 201
M-Factor	100
(Acule aqualic loxicity):	100 EC50 (activated sludge): 7.92 mg/l
Toxicity to microorganisms.	Exposure time: 3 h
	Method: OECD Test Guideline 209
Toxicity to fish	
(Chronic toxicity).	Exposure time: 28 d
	Species: Oncorhynchus mykiss (rainbow trout)
	Method: OECD Test Guideline 215
Toxicity to daphnia and other	
(Chronic toxicity):	NOEC: 0.004 mg/l
(Onionio toxicity).	Exposure time: 21 d
	Species: Daphnia magna (Water flea)
M Faster	Method: OECD Test Guideline 202
(Chronic aquatic toxicity):	10
organisms:	LC50: 86,6 ma/kg dry weight (d.w.)
5	Exposure time: 14 d
	Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207
	NOEC: 8,83 mg/kg dry weight (d.w.)
	Exposure time: 14 d Species: Eigenia fotida (carthworma)
	OECD Test Guideline 207
Ecotoxicology Assessment	
Acute aquatic toxicity:	Very toxic to aquatic life.
Chronic aquatic toxicity:	Very toxic to aquatic life with long lasting effects.

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12.2.	. Persistence and degradability		
	Informations related to the product: Biodegradability:	no data available	
	Informations related to the component Rosin amine:		
	Biodegradability:	Test Type: aerobic Inoculum: activated sludge Result: Not readily biodegradable. Biodegradation: 9 % Exposure time: 28 d Method: OECD Test Guideline 301B	
	Informations related to the component	1,2-Benzisothiazol-3(2H)-one:	
	Biodegradability:	Test Type: aerobic Inoculum: activated sludge Concentration: 1 mg/l Result: Partially biodegradable. Exposure time: 63 d Method: OECD Test Guideline 301C GLP: yes	
	Physico-chemical removability:	Remarks: Biodegradable	
	Stability in water:	Test Type: abiotic Degradation half life: 219 d pH: 4	
		Mydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes	
		Test Type: abiotic Degradation half life: > 200 d pH: 7 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes	
		Test Type: abiotic Degradation half life: 145 d pH: 9 Hydrolysis: at 50 °C Method: OECD Test Guideline 111 GLP: yes	
	Photodegradation:	Test Type: water Light source: Xenon lamp Light spectrum: 290 - 400 nm Degradation (direct photolysis): < 1,5 % GLP: yes	
		Test Type: air Method: calculated GLP: no Remarks: Decomposes rapidly in contact with light.	
	Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one		
	<u>2-metnyi-2H-isotniazoi-3-one(3:1):</u> Biodegradability:	Test Type: aerobic Inoculum: activated sludge Result: Not rapidly biodegradable Method: OECD Test Guideline 301B	
	Photodegradation:	Test Type: water Light source: Sunlight	

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12.3.	Bioaccumulative potential <u>Informations related to the product:</u> Bioaccumulation:	no data available
	Informations related to the componen Bioaccumulation:	<u>t Rosin amine:</u> Remarks: no data available
	<u>Informations related to the componen</u> Bioaccumulation:	t 1,2-Benzisothiazol-3(2H)-one: Species: Lepomis macrochirus (Bluegill sunfish) Exposure time: 56 d Concentration: 0,1 mg/l Bioconcentration factor (BCF): 6,62 Method: OECD Test Guideline 305 GLP: no Remarks: Due to the distribution coefficient n-octanol/water,accumulation in organisms is not expected.
	Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	Bioaccumulation:	Bioconcentration factor (BCF): 3,6 Method: calculated Remarks: Does not accumulate in organisms.
	Partition coefficient n-octanol/water:	log Pow: -0,71 - 0,75 Method: OECD Test Guideline 107
12.4.	Mobility in soil Informations related to the componen	t Rosin amine:
	Distribution among environmental compartments:	adsorption Medium: water – soil Remarks: The product is insoluble and floats on water.
	Informations related to the componen	t 1,2-Benzisothiazol-3(2H)-one:
	environmental compartments:	Adsorption/Soil Medium: water – soil Koc: 235 – 566 Method: Other
12.5.	Results of PBT and vPvB assessment <u>Informations related to the product:</u> This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at le of 0.1 % or higher	
	Informations related to the componen Assessment:	<u>t Rosin amine:</u> This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
	Informations related to the componen Assessment:	<u>t 1,2-Benzisothiazol-3(2H)-one:</u> The substance is not identified as a PBT or as a vPvB substance.
	Informations related to the componen 2-methyl-2H-isothiazol-3-one(3:1):	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and
	Assessment:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

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12.6. Other adverse effects

Informations related to the product:		
Environmental fate and pathways:	no data available	
Additional ecological information:	no data available	
Informations related to the component Rosin amine:		
Environmental fate and pathways:	no data available	
Additional ecological information:	The product should not be allowed to enter drains, water courses or the soil.	
Informations related to the component 1,2-Benzisothiazol-3(2H)-one:		
Environmental fate andpathways:	not available	
Additional ecological information:	Do not allow to enter ground water, waterways or waste water.	
Informations related to the componen	t mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and	
2-methyl-2H-isothiazol-3-one(3:1):	· · · · · ·	
Additional ecological information:	The product should not be allowed to enter drains, watercourses or the soil.	

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product:

Dispose of in accordance with the European Directives on waste and hazardous waste.

Uncleaned packaging:

This material and its container must be disposed of in a safe way.

SECTION 14: TRANSPORT INFORMATION

14.1. to 14.5.

ADR:	not restricted
ADN:	not restricted
RID:	not restricted
IATA:	not restricted
IMDG:	not restricted

14.6. Special precautions for users

See sections 6 to 8 of this Safety Data Sheet.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No transport as bulk according IBC-Code.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of	
Very High Concern for Authorisation (Article 59):	Not applicable
REACH - List of substances subject to authorisation	
(Annex XIV):	Not applicable
Regulation (EC) No 1005/2009 on substances that	
deplete the ozone layer:	Not applicable
Regulation (EC) No 850/2004 on persistent	
organic pollutants:	Not applicable

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

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15.2. Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

SECTION 16: OTHER INFORMATION

Observe the legal requirements nationally and locally.

List of the text of the hazard statements mentioned section 3 (H-phrases):

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.:	Acute toxicity
Aquatic Acute:	Short-term (acute) aquatic hazard
Aquatic Chronic:	Long-term (chronic) aquatic hazard
Eye Dam.:	Serious eye damage
Skin Corr.:	Skin corrosion
Skin Irrit.:	Skin irritation
Skin Sens.:	Skin sensitisation
STOT RE:	Specific target organ toxicity - repeated exposure

Change compared to the previous version:

Change in the composition

Legend

ADN	European Agreement concerning the International Carriage of
	Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of
	Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ASTM	American Society for the Testing of Materials
bw	Body weight
CLP	Classification Labelling Packaging Regulation
	Regulation (EC) No 1272/2008
CMR	Carcinogen, Mutagen or Reproductive Toxicant
DIN	Standard of the German Institute for Standardisation
DMEL	Derived Minimal Effect Level (genotoxic substances)
DNEL	Derived No Effect Level
DSL	Domestic Substances List (Canada)
ECHA	European Chemicals Agency
EC-Number	European Community number
ECx	Concentration associated with x% response
ELx	Loading rate associated with x% response
EmS	Emergency Schedule
ENCS	Existing and New Chemical Substances (Japan)
ErCx	Concentration associated with x% growth rate response
GHS	Globally Harmonized System
GLP	Good Laboratory Practice
IARC	International Agency for Research on Cancer

in acc. with Regulation (EU) No. 2015/830

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IATA	International Air Transport Association		
IBC	International Code for the Construction and Equipment of Ships		
	carrying Dangerous Chemicals in Bulk		
IC50	Half maximal inhibitory concentration		
ICAO	International Civil Aviation Organization		
IECSC	Inventory of Existing Chemical Substances in China		
IMDG	International Maritime Dangerous Goods		
IMO	International Maritime Organization		
ISHL	Industrial Safety and Health Law (Japan)		
ISO	International Organisation for Standardization		
KECI	Korea Existing Chemicals Inventory		
LC50	Lethal Concentration to 50 % of a test population		
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)		
MARPOL	International Convention for the Prevention of Pollution from Ships		
n.o.s.	Not Otherwise Specified		
NO(A)EC	No Observed (Adverse) Effect Concentration		
NO(A)EL	No Observed (Adverse) Effect Level		
NOELR	No Observable Effect Loading Rate		
NZIOC	New Zealand Inventory of Chemicals		
OECD	Organization for Economic Co-operation and Development		
OPPIS	Office of Chemical Safety and Pollution Prevention		
PBI	Persistent, Bioaccumulative and Toxic substance		
PICCS	Philippines Inventory of Chemicals and Chemical Substances		
(Q)SAR	(Quantitative) Structure Activity Relationship		
REACH	Regulation (EC) No 1907/2006 of the European Parliament and of the	ie	
	Council concerning the Registration, Evaluation, Authorisation and		
סוס	Restriction of Chemicals	l -	
RID	Regulations concerning the international Carriage of Dangerous Goo	Jas	
CADT	by Rail Calif A sackaratian Decembra sitism Tanan antum		
SADI	Self-Accelerating Decomposition Temperature		
5D2	Salely Data Sheet		
	Taiwan Chemical Substance Inventory		
	Tevin Substances Centrel Act (United States)		
ISCA	I united Nationa		
	United Nations		
VEVB	very Persistent and very bloaccumulative		

Decimal notation: "thousands" places are identified with a dot (for example, "2.000 mg/kg" means "two thousand mg/kg"). Decimal places are identified with a comma (for example, "1,35 g/cm³" means "one point three five g/cm³").

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