

COMBINED SAFETY DATA SHEET

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

1.1. Product identifier

Product form : Mixture
Product name : GlassCast 3 Clear Epoxy Surface Resin
Type of product : Resin

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

1.2.1. Relevant identified uses

Intended for general public
Main use category : Industrial use
Industrial/Professional use spec : Intended for general public
Industrial
Use of the substance/mixture : Industrial laminating resin, casting, injection, winding, infusion, gluing, foaming, coatings and sealants.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Easy Composites Ltd
Unit 39, Park Hall Business Village, Stoke on Trent,
Staffordshire, ST3 5XA. United Kingdom.
T +44 (0) 1782 454499 (08:00 - 17:30hrs, Mon-Fri) -
sales@easycomposites.co.uk www.easycomposites.co.uk

1.4. Emergency telephone number

Emergency number 44 (0) 1782 454499 (08:00 - 17:30hrs, Mon-Fri)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1, Sub-Category 1B H314
Skin sensitisation, Category 1 H317
Reproductive toxicity, Category 2 H361
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS07

GHS08

GHS09

Signal word (CLP) :

Danger

Contains :

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700); Formaldehyde, polymer with (chloromethyl)oxirane and phenol; 4-nonylphenol, branched; C13/C15-Alkylglycidylether

Hazard statements (CLP) :

H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H361 - Suspected of damaging fertility. Suspected of damaging the unborn child..
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P102 - Keep out of reach of children.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, protective clothing, eye protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation..

EUH-statements

: EUH205 - Contains epoxy constituents. May produce an allergic reaction.

2.3. Other hazards

Other hazards which do not result in classification : None under normal conditions.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
Formaldehyde, polymer with (chloromethyl)oxirane and phenol (9003-36-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
4-nonylphenol, branched (84852-15-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
4-nonylphenol, branched(84852-15-3)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	(CAS-No.) 25068-38-6 (EC-No.) 500-033-5 (EC Index-No.) 603-074-00-8 (REACH-no) 01-2119456619-26	40 – 80	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Formaldehyde, polymer with (chloromethyl)oxirane and phenol	(CAS-No.) 9003-36-5 (EC-No.) 500-006-8 (REACH-no) 01-2119454392-40	10 – 40	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411 Eye Irrit. 2, H319
C13/C15-Alkylglycidylether	(CAS-No.) 68081-84-5 (EC-No.) 268-358-2 (REACH-no) 01-2119962192-39	1 – 20	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
4-nonylphenol, branched substance listed as REACH Candidate (4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]) substance listed in REACH Annex XIV (4-Nonylphenol, branched and linear, ethoxylated (substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof))	(CAS-No.) 84852-15-3 (EC-No.) 284-325-5 (EC Index-No.) 601-053-00-8 (REACH-no) 01-2119510715-45	1 – 10	Acute Tox. 4 (Oral), H302 (ATE=1412 mg/kg de poids corporel) Skin Corr. 1B, H314 Eye Dam. 1, H318 Repr. 2, H361fd Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

Specific concentration limits:

Name	Product identifier	Specific concentration limits
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	(CAS-No.) 25068-38-6 (EC-No.) 500-033-5 (EC Index-No.) 603-074-00-8 (REACH-no) 01-2119456619-26	(5 ≤C < 100) Skin Irrit. 2, H315 (5 ≤C < 100) Eye Irrit. 2, H319

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Allow the victim to rest. Allow affected person to breathe fresh air. Give oxygen or artificial respiration if necessary. If breathing stops, give artificial respiration. Call a POISON CENTER/doctor.
First-aid measures after skin contact	: Take off contaminated clothes, wash skin with plenty of water or have a shower (during minimum 15 minutes) and if necessary take medical advice. Be careful, the product may remain trapped under clothing, footwear or a wrist-watch. Do not use solvents or thinners. If on skin and if skin irritation or rash occurs, seek medical advice and attention.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist immediately.
First-aid measures after ingestion	: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER/doctor.

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

- Symptoms/effects after inhalation : May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.
- Symptoms/effects after skin contact : Causes skin irritation. May cause moderate irritation. This material or its emissions may induce an allergic or sensitization reaction and thereby aggravate existing systemic disease.
- Symptoms/effects after eye contact : Causes eye irritation. May cause moderate irritation, including burning sensation, tearing, redness or swelling.

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

For the Anti-poison Center indicate all the components including the non dangerous ones to obtain (when possible) a total of 100 %.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Water spray. Dry powder. Alcohol resistant foam.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Explosion hazard : Heat may cause pressure rise with explosion of tanks/drums.
- Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide. Nitrogen oxides. Toxic fumes.

5.3. Advice for firefighters

- Firefighting instructions : Evacuate the danger area. Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Exercise caution when fighting any chemical fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Manipulations are to be done only by qualified and authorised persons. Wear recommended personal protective equipment.
- Emergency procedures : If a major spill occurs, all personnel should be immediately evacuated and the area ventilated.

6.1.2. For emergency responders

- Protective equipment : Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection. Wear proper protective equipment.
- Emergency procedures : Stop release. Place in an appropriate container and dispose of the contaminated material at a licensed site.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store, if possible, in a cool, well ventilated place away from incompatible materials. Keep container closed when not in use.
- Incompatible products : Oxidizing agent. Strong bases. Strong acids.
- Storage area : Store in a well-ventilated place.
- Special rules on packaging : Store in a closed container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gas mask. Protective clothing. In case of splash hazard: safety glasses. Gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or face shield

8.2.2.2. Skin protection

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Skin and body protection:

Wear suitable protective clothing

Hand protection:

Nitrile-rubber protective gloves. Chemical resistant gloves (according to European standard NF EN 374 or equivalent)

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. Gas mask with filter type A

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Consumer exposure controls:

Avoid contact during pregnancy/while nursing.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: colourless to slightly yellow.
Appearance	: Liquid.
Odour	: slight.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 1.15
Relative density	: 1.15
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable in use and storage conditions as recommended in item 7.

10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Strong acids. Oxidizing agent. Strong bases. Amines.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. Nitrogen oxides. Toxic fumes.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (25068-38-6)

LD50 oral rat	11400 mg/kg
LD50 oral	≈ 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

Formaldehyde, polymer with (chloromethyl)oxirane and phenol (9003-36-5)

LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

4-nonylphenol, branched (84852-15-3)

LD50 oral rat	1412 mg/kg
LD50 dermal rabbit	2031 mg/kg

C13/C15-Alkylglycidylether (68081-84-5)

LD50 oral rat	> 5000 mg/kg
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Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Assumed to cause serious eye damage
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility. Suspected of damaging the unborn child..
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: No data.
Ecology - air	: No data.
Ecology - water	: No data.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Very toxic to aquatic life with long lasting effects.

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) (25068-38-6)

LC50 - Fish [1]	1.3 mg/l
EC50 - Crustacea [1]	2.1 mg/l
EC50 72h - Algae [1]	11 mg/l

Formaldehyde, polymer with (chloromethyl)oxirane and phenol (9003-36-5)

LC50 - Fish [1]	2.54 mg/l
EC50 - Crustacea [1]	2.55 mg/l
EC50 72h - Algae [1]	> 1000 mg/l

4-nonylphenol, branched (84852-15-3)

LC50 - Fish [1]	0.05 mg/l
EC50 - Crustacea [1]	0.085 mg/l

12.2. Persistence and degradability

VLC A

Persistence and degradability	No data.
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4-nonylphenol, branched (84852-15-3)

Biodegradation	100 %
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C13/C15-Alkylglycidylether (68081-84-5)

Persistence and degradability	No data.
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12.3. Bioaccumulative potential

VLC A

Bioaccumulative potential	No data.
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4-nonylphenol, branched (84852-15-3)

Partition coefficient n-octanol/water (Log Pow)	5.4
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Partition coefficient n-octanol/water (Log Kow)	5.4
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C13/C15-Alkylglycidylether (68081-84-5)

Bioaccumulative potential	No data.
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12.4. Mobility in soil

VLC A

Ecology - soil	No data.
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C13/C15-Alkylglycidylether (68081-84-5)

Ecology - soil	No data.
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12.5. Results of PBT and vPvB assessment

VLC A

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component

Formaldehyde, polymer with (chloromethyl)oxirane and phenol (9003-36-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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4-nonylphenol, branched (84852-15-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Other adverse effects : No data

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Do not flush down sewers. Dispose of this material and its container at hazardous or special waste collection point.
Product/Packaging disposal recommendations	: Recycle or dispose of in compliance with current legislation.
Ecology - waste materials	: Avoid release to the environment.






SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

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ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Environmentally hazardous substance, liquid, n.o.s.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) ; Formaldehyde, polymer with (chloromethyl)oxirane and phenol), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) ; Formaldehyde, polymer with (chloromethyl)oxirane and phenol), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) ; Formaldehyde, polymer with (chloromethyl)oxirane and phenol), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) ; Formaldehyde, polymer with (chloromethyl)oxirane and phenol), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) ; Formaldehyde, polymer with (chloromethyl)oxirane and phenol), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: M6
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12

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Special provisions for carriage - Loading, unloading
and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates :



Tunnel restriction code (ADR) : -
EAC code : •3Z

Transport by sea

Special provisions (IMDG) : 274, 335, 969
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : LP01, P001
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP2, TP29
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-F
Stowage category (IMDG) : A

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y964
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 964
PCA max net quantity (IATA) : 450L
CAO packing instructions (IATA) : 964
CAO max net quantity (IATA) : 450L
Special provisions (IATA) : A97, A158, A197
ERG code (IATA) : 9L

Inland waterway transport

Classification code (ADN) : M6
Special provisions (ADN) : 274, 335, 375, 601
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : M6
Special provisions (RID) : 274, 335, 375, 601
Limited quantities (RID) : 5L
Excepted quantities (RID) : E1
Packing instructions (RID) : P001, IBC03, LP01, R001
Special packing provisions (RID) : PP1
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1, TP29
Tank codes for RID tanks (RID) : LGBV
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Special provisions for carriage - Loading, unloading
and handling (RID) : CW13, CW31
Colis express (express parcels) (RID) : CE8
Hazard identification number (RID) : 90

14.7. Maritime transport in bulk according to IMO instruments

IBC code : Not applicable.

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: 4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] (EC 284-325-5, CAS 84852-15-3)

Contains REACH Annex XIV substances: 4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] (EC 284-325-5, CAS 84852-15-3)

Substances subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals: Nonylphenols C₆H₄(OH)C₉H₁₉ (84852-15-3)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

Not applicable

SECTION 16: Other information

Indication of changes:

Revision - See : *.

- Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
- Other information : Information in this safety data sheet is based on actual knowledge in our possession and our experience. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. It is the user's responsibility to take mentioned precaution measures and ensure that this information is complete and sufficient for the use of this product.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

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H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
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.
EUH205	Contains epoxy constituents. May produce an allergic reaction.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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

1.1. Product identifier

Product form : Mixture
 Product name : GlassCast 3 Epoxy Hardener For GlassCast 3
 Type of product : Hardener (Crosslinker)

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

1.2.1. Relevant identified uses

Intended for general public
 Main use category : Industrial use
 Industrial/Professional use spec : Intended for general public
 Industrial
 Use of the substance/mixture : Laminating hardener, casting, injection, winding, infusion, gluing, foaming, coatings and sealants.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Easy Composites Ltd
 Unit 39, Park Hall Business Village, Stoke on Trent,
 Staffordshire, ST3 5XA. United Kingdom.
 T +44 (0) 1782 454499 (08:00 - 17:30hrs, Mon-Fri)
sales@easycomposites.co.uk - www.easycomposites.co.uk

1.4. Emergency telephone number

Emergency number T +44 (0) 1782 454499 (08:00 - 17:30hrs, Mon-Fri)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302
 Acute toxicity (inhalation:dust,mist) Category 4 H332
 Skin corrosion/irritation, Category 1, Sub-Category 1B H314
 Skin sensitisation, Category 1 H317
 Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412
 Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS05

GHS07

Signal word (CLP)

: Danger

Contains

: Propylidynetrimehtanol, propoxylated, reaction products with ammonia; 3-aminomethyl-3,5,5-trimethylcyclohexylamine; 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine; benzyl alcohol

Hazard statements (CLP)

: H302+H332 - Harmful if swallowed or if inhaled.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P102 - Keep out of reach of children.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation..

2.3. Other hazards

Component

benzyl alcohol (100-51-6)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
benzyl alcohol	(CAS-No.) 100-51-6 (EC-No.) 202-859-9 (EC Index-No.) 603-057-00-5 (REACH-no) 01-2119492630-38	20 – 60	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg de poids corporel) Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319

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Propylidynetrimethanol, propoxylated, reaction products with ammonia	(CAS-No.) 39423-51-3 (EC-No.) 500-105-6 (REACH-no) 01- 2119556886-20	10 – 40	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg de poids corporel) Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg de poids corporel) Eye Dam. 1, H318 Aquatic Chronic 2, H411
3-aminomethyl-3,5,5-trimethylcyclohexylamine	(CAS-No.) 2855-13-2 (EC-No.) 220-666-8 (EC Index-No.) 612-067-00-9 (REACH-no) 01-2119514687-32	10 – 40	Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg de poids corporel) Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg de poids corporel) Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro- 2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine	(CAS-No.) 38294-64-3 (EC-No.) 500-101-4	1 – 10	Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412 Eye Dam. 1, H318 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Oral), H302

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Respiratory arrest: artificial respiration or oxygen. If unconscious place in recovery position and seek medical advice.
First-aid measures after skin contact	: Wash contaminated clothing before reuse. Take off contaminated clothes, wash skin with plenty of water or have a shower (during minimum 15 minutes) and if necessary take medical advice. If on skin and if skin irritation or rash occurs, seek medical advice and attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse eye with clean water for 20-30 minutes, retracting eyelids often. Consult an eye specialist if necessary.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting because of corrosive effects. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects after inhalation	: Cough. May cause respiratory irritation. Severe inhalation hazard.
Symptoms/effects after skin contact	: May cause moderate irritation.
Symptoms/effects after eye contact	: May cause moderate irritation, including burning sensation, tearing, redness or swelling. Risk of damage to eyes.
Symptoms/effects after ingestion	: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

For the Anti-poison Center indicate all the components including the non dangerous ones to obtain (when possible) a total of 100 %.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Foam. Dry powder. Carbon dioxide.
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Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Do not breathe fumes from fires or vapours from decomposition.
Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide. Nitrogen oxides.

5.3. Advice for firefighters

Precautionary measures fire : Evacuate personnel to a safe area. Do not enter fire area without proper protective equipment, including respiratory protection.
Firefighting instructions : Exercise caution when fighting any chemical fire. Unauthorized persons are not admitted. Eliminate all ignition sources if safe to do so. Prevent fire fighting water from entering the environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus. Special protective equipment for fire-fighters.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No open flames. No smoking. Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Do not allow to enter drains or water courses.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour. Avoid all unnecessary exposure. Do not handle until all safety precautions have been read and understood. Keep containers closed.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Store, if possible, in a cool, well ventilated place away from incompatible materials.
Incompatible products : Strong acids. Oxidizing agent. Halogenated hydrocarbons.
Incompatible materials : Heat sources.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:

Self-contained breathing apparatus. Gloves. Gas mask. Protective clothing. Protective goggles. High gas/vapour concentration: gas mask with filter type K.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

No additional information available

8.2.2.2. Skin protection

No additional information available

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. High gas/vapour concentration: gas mask with filter type K

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: Amine-like.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available

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Flammability	: Not available
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 1 g/cm ³
Relative density	: 1
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable in use and storage conditions as recommended in item 7.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Strong acids. Oxidizing agent. metals. halogenated hydrocarbons.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified

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Acute toxicity (inhalation) : Harmful if inhaled.

VLC B

ATE CLP (oral)	602.41 mg/kg bodyweight
ATE CLP (dust,mist)	4.412 mg/l/4h

3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)

LD50 oral rat	1030 mg/kg
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benzyl alcohol (100-51-6)

LD50 oral rat	1620 mg/kg
LC50 Inhalation - Rat	> 4178 mg/m ³

Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Assumed to cause serious eye damage
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2)

LC50 - Fish [1]	110 mg/l
EC50 - Crustacea [1]	23 mg/l
EC50 - Other aquatic organisms [1]	37 mg/l
EC50 72h - Algae [1]	> 50 mg/l

benzyl alcohol (100-51-6)

LC50 - Fish [1]	460 mg/l
EC50 72h - Algae [1]	770 mg/l
NOEC chronic algae	310 mg/l

12.2. Persistence and degradability

No additional information available

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

benzyl alcohol (100-51-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available






SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 2735	UN 2735	UN 2735	UN 2735	UN 2735
14.2. UN proper shipping name				
AMINES, LIQUID, CORROSIVE, N.O.S.	AMINES, LIQUID, CORROSIVE, N.O.S.	Amines, liquid, corrosive, n.o.s.	AMINES, LIQUID, CORROSIVE, N.O.S.	AMINES, LIQUID, CORROSIVE, N.O.S.
Transport document description				
UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine ; benzyl alcohol), 8, III, (E)	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine ; benzyl alcohol), 8, III	UN 2735 Amines, liquid, corrosive, n.o.s. (3-aminomethyl-3,5,5-trimethylcyclohexylamine ; benzyl alcohol), 8, III	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine ; benzyl alcohol), 8, III	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine ; benzyl alcohol), 8, III
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
III	III	III	III	III

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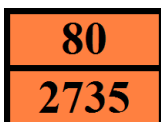
14.5. Environmental hazards

Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C7
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP1, TP28
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 2X
APP code	: B

Transport by sea

Special provisions (IMDG)	: 223, 274
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP28
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: A
Segregation (IMDG)	: SGG18, SG35
Properties and observations (IMDG)	: Colourless to yellowish liquids or solutions with a pungent odour. Miscible with or soluble in water. When involved in a fire, evolve toxic gases. Corrosive to most metals, especially to copper and its alloys. Reacts violently with acids. Cause burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

Inland waterway transport

Classification code (ADN)	: C7
Special provisions (ADN)	: 274
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1

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Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0
Rail transport	
Classification code (RID)	: C7
Special provisions (RID)	: 274
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP1, TP28
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 80

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes:

Revision - See : *

Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Other information	: Information in this safety data sheet is based on actual knowledge in our possession and our experience. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. It is the user's responsibility to take mentioned precaution measures and ensure that this information is complete and sufficient for the use of this product.

Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Sens. 1	Skin sensitisation, Category 1
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SAFETY DATA SHEET

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

Revision Date: 04/02/2019

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):

Category of danger	Category Hazard Symbol	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.

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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: $\geq 5,3 - \leq 12,6$ %

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: $\geq 0,0025 - \leq 0,025$ %

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 if inhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an allergic 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: $\geq 0,0002 - \leq 0,0015$ %

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 toxicity	Category 2	H310
Fatal if inhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314
May cause an allergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 1	H410

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

SECTION 4: FIRST AID MEASURES

4.1. Description 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

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.

Further information:

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

Additional information:

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

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.

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 silicon 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

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:	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:	not determined
Thermal decomposition:	> 100 °C
Viscosity (dynamic):	not tested
Oxidizing properties:	no data available

9.2. Other information

Density:	1,80 g/cm ³ (20 °C)
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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 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
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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
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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 2-methyl-2H-isothiazol-3-one (3:1):

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

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 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
Species: Guinea pig
Method: Other

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Result: May cause sensitisation by skin contact.
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: Guinea pig
Method: Other
Result: The product is a skin sensitiser, sub-category 1A.
Assessment: Toxic if swallowed,
Fatal in contact with skin,
Fatal if inhaled,
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 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
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
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
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

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

Genotoxicity in vitro: Test Type: In vitro study

Metabolic activation:
with and without metabolic
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

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

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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
Effects on foetal development:	Method: Other GLP: yes 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 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: yes
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

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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 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 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 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

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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

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 component 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 component 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
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

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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
	Remarks: salt water
Toxicity to algae:	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
	GLP: yes
M-Factor	
(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

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

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	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 aestivum (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 aestivum (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:	Remarks: not available
Ecotoxicology Assessment	
Acute aquatic toxicity:	Very toxic to aquatic life.
Chronic aquatic toxicity:	Toxic to aquatic life with long lasting effects.
<u>Informations related to the component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):</u>	
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

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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) Method: OECD Test Guideline 202
M-Factor (Chronic aquatic toxicity):	10
Toxicity to soil dwelling 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:	Very toxic to aquatic life.
Chronic aquatic toxicity:	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 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
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

Photodegradation: 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: Decomposes rapidly in contact with light.

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

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

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 component 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
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 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 assessment

Informations related to the product:

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.

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

Assessment: The substance is not identified as a PBT or as a vPvB substance.

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: 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 and pathways: 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 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.

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

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
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

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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
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.

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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 – Topaz Green

Chemical

characterisation: C.I. Pigment Green 7 and Calciumcarbonat in aqueous dispersion, containing 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: 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):

Category of danger	Category Hazard Symbol	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.

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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-Factor (Acute 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 if inhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an allergic 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 toxicity	Category 2	H310
Fatal if inhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314
May cause an allergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 1	H410

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

SECTION 4: FIRST AID MEASURES**4.1. Description 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 symptomsSymptoms:

None known.

Hazards:

None known.

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

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 mixtureIn case of fires, hazardous combustion gases are formed:

Carbon oxides (CO_x)

Nitrogen oxides (NO_x)

5.3. Advice for firefightersSpecial protective equipment for firefighting:

Use self-contained breathing apparatus.

Further information:

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.

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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

Additional information:

Information regarding safe handling, see chapter 7.

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

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.

DNEL / DMEL-values:

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

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

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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

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

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-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
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.)

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

EC-Nummer: 611-341-5

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

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
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

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9.2. Other information

Density: 1,23 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: Remarks: no data available

Information related to the component 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-C8-18 acyl derivs., hydroxides, inner salts:

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

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: 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 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 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 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
Species: Guinea pig
Method: Other
Result: May cause sensitisation by skin contact.
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: Guinea pig
Method: Other
Result: The product is a skin sensitiser, sub-category 1A.
Assessment: Toxic if swallowed,
Fatal in contact with skin,
Fatal if inhaled,

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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 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
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
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
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.

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

Genotoxicity in vitro:	Test Type: In vitro study
Metabolic activation: with and without metabolic 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

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

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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.
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
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: yes

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 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.

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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 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 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

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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 component 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 component 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 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 Analytical monitoring: yes Method: Other

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Toxicity to algae:	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 (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 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

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	<p>Exposure time: 21 d Species: Daphnia magna (Water flea) Analytical monitoring: yes Method: OECD Test Guideline 211 GLP: yes</p> <p>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</p>
Toxicity to soil dwelling organisms:	<p>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.</p> <p>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.</p>
Plant toxicity:	<p>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.</p> <p>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.</p> <p>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</p>

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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 aestivum (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: 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 component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

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

Toxicity to soil dwelling organisms:

LC50: 86,6 mg/kg dry weight (d.w.)

Exposure time: 14 d

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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:

Very toxic to aquatic life.

Chronic aquatic toxicity:

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 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
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

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

Biodegradability: Test Type: aerobic
Inoculum: activated sludge
Result: Not rapidly biodegradable
Method: OECD Test Guideline 301B

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

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 component 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
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 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 assessment

Informations related to the product:

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.

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

Assessment: The substance is not identified as a PBT or as a vPvB substance.

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

Environmental fate and pathways: not available
Additional ecological information: Do not allow to enter ground water, waterways or waste water.

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Informations related to the component 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.

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.

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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
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)

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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
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.

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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 – 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

Identification of the company:

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):

Category of danger	Category Hazard Symbol	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.

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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

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 if inhaled	Category 2	H330
Skin irritation	Category 2	H315
May cause an allergic 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 toxicity	Category 2	H310
Fatal if inhaled	Category 2	H330
Causes severe skin burns and eye d.	Category 1B	H314
May cause an allergic skin reaction	Category 1	H317
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 1	H410

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

SECTION 4: FIRST AID MEASURES

4.1. Description 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.

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

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.

Further information:

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

Additional information:

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

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.

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

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)

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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-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

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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: 1,22 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: Remarks: no data available

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: 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.

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

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

Species: rabbit eye
Result: Risk of serious damage to eyes.

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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
RESULT: May cause sensitisation by skin contact.
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: Guinea pig
Method: Other
Result: The product is a skin sensitiser, sub-category 1A.
Assessment: Toxic if swallowed,
Fatal in contact with skin,
Fatal if inhaled,
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 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
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
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
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

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

Genotoxicity in vitro:

Test Type: In vitro study

Metabolic activation:

with and without metabolic
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

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.

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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 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: yes
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

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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 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 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 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 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

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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: 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 component 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 component 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
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 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 Analytical monitoring: yes Method: Other GLP: yes Remarks: salt water
Toxicity to algae:	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 (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

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	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
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.

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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 aestivum (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 aestivum (wheat)
Analytical monitoring: yes
Method: OECD Guide-line 208
GLP:yes
Remarks: The details of the toxic effect relate to the nominal concentration.
Remarks: not available

Sediment toxicity:

Ecotoxicology Assessment

Acute aquatic toxicity:

Chronic aquatic toxicity:

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

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

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

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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
Toxicity to soil dwelling 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:	Very toxic to aquatic life.
Chronic aquatic toxicity:	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 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
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 component mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one(3:1):

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

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 component 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
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 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 assessment

Informations related to the product:

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.

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

Environmental fate and pathways: 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 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

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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
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
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.

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