GlassCast 10/50 Epoxy Casting Resin

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11.0 SDB_REG_EU	18.06.2025	Date of first issue: 30.04.2014

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

1.1 Product identifier

Trade name : GlassCast 10/50 Epoxy Resin
UFI 3RT1-H94T-V007-8VEM

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

Type of Application (Use) : Electrical Insulation

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company name: Easy Composites Ltd
Unit 39, Park Hall Business Village
Longton, Stoke on Trent
Staffordshire
ST3 5XA
United Kingdom
Tel: +44 (0) 1782 454499
Email: sales@easycomposites.com

1.4 Emergency telephone number

+44 (0) 1782 454499
(office hours only)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 1B	H360F: May damage fertility.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word	:	Danger
Hazard Statements	:	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H360F May damage fertility. H411 Toxic to aquatic life with long lasting effects.
Precautionary Statements	:	**Prevention:** P201 Obtain special instructions before use. P261 Avoid breathing mist or vapors. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection. **Response:** P308 + P313 IF exposed or concerned: Get medical advice/ attention. P391 Collect spillage.

Hazardous ingredients which must be listed on the label:
bis-[4-(2,3-epoxipropoxi)phenyl]propane

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

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

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

Additional Labeling
EUH205 Contains epoxy constituents. May produce an allergic reaction.

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Modified epoxy resin

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3 216-823-5 603-073-00-2 01-2119456619-26	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411 ——————— specific concentration limit Eye Irrit. 2; H319 >= 5 % Skin Irrit. 2; H315 >= 5 %	>= 50 - <= 100
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	68609-97-2 271-846-8 603-103-00-4 01-2119485289-22	Skin Irrit. 2; H315 Skin Sens. 1; H317 Repr. 1B; H360F	>= 10 - < 12,5
1,4-bis(2,3 epoxypropoxy)butane	2425-79-8 219-371-7 603-072-00-7 01-2119494060-45	Acute Tox. 4; H302 Repr. 1B; H360F	>= 5 - < 7
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl Sebacate	1065336-91-5 01-2119491304-40	Skin Sens. 1A; H317 Repr. 2; H361f Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ——————— M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 0,1 - < 0,25

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice : Keep warm and in a quiet place.
Show this material safety data sheet to the doctor in attendance.

Take off all contaminated clothing immediately.

If inhaled : Move to fresh air.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact : Wash off immediately with soap and plenty of water.
Do NOT use solvents or thinners.
If on clothes, remove clothes.
If skin irritation persists, call a physician.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If eye irritation persists, consult a specialist.
If easy to do, remove contact lens, if worn.

If swallowed : Keep at rest.
Do not induce vomiting without medical advice.
Keep respiratory tract clear.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : irritant effects
Redness
sensitizing effects

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Foam
Sand
Carbon dioxide (CO2)
Water mist

Unsuitable extinguishing media : Water spray jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : The pressure in sealed containers can increase under the influence of heat.
Cool closed containers exposed to fire with water spray.

5.3 Advice for firefighters

Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Further information	:	In the event of fire and/or explosion do not breathe fumes. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Refer to protective measures listed in sections 7 and 8. Evacuate personnel to safe areas. Use personal protective equipment. Ensure adequate ventilation. Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

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

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms. Avoid inhalation, ingestion and contact with skin and eyes. Wear personal protective equipment. Persons with a history of skin sensitization problems or asth-

ma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Advice on common storage : Keep away from oxidizing agents, strongly acid or alkaline materials and amines.
Keep product and empty container away from heat and sources of ignition.
Keep away from food and drink.

Further information on storage stability : Stable at normal ambient temperature and pressure.

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

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

Substance name	End Use	Routes of exposure	Potential health effects	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Workers	Skin contact	Acute systemic effects, Long-term systemic effects	8,33 mg/kg
	Workers	Inhalation	Acute systemic effects, Long-term local effects	12,25 mg/m3
	Consumers	Skin contact	Acute systemic effects, Long-term systemic effects	3,571 mg/kg
	Consumers	Ingestion	Acute systemic effects, Long-term systemic effects	0,75 mg/kg
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Workers	Skin contact	Long-term systemic effects	3,9 mg/kg
	Workers	Inhalation	Long-term systemic effects	13,8 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Fresh water	0,006 mg/l
	Sea water	0,0006 mg/l
	Intermittent releases	0,018 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0,996 mg/kg
	Sea sediment	0,0996 mg/kg
	Soil	0,196 mg/kg
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Sewage treatment plant	10 mg/l
	Fresh water	0,0072 mg/l
	Sea water	0,00072 mg/l
	Fresh water sediment	66,77 mg/kg
	Sea sediment	6,677 mg/kg
	Soil	80,12 mg/kg

8.2 Exposure controls

Engineering measures
Effective exhaust ventilation system
effective ventilation in all processing areas

Personal protective equipment

Eye protection : Do not wear contact lenses.
Safety glasses with side-shields conforming to EN166
Ensure that eyewash stations and safety showers are close to the workstation location.

Hand protection

Material : Protective gloves complying with EN 374.

Material : butyl-rubber
Break through time : > 480 min
Glove thickness : 0,35 mm

Material : Neoprene
Break through time : > 480 min
Glove thickness : 0,35 mm

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : 0,35 mm

Remarks : For prolonged or repeated contact use protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things from the material, the thickness and the type of glove and therefore has to be measured for each case. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Protective suit

Respiratory protection : Use respiratory protection unless adequate local exhaust ven-

		tilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. In the case of vapor formation use a respirator with an approved filter. Equipment should conform to EN 14387 Apply technical measures to comply with the occupational exposure limits. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation.
Protective measures	:	Avoid contact with skin. Wear suitable protective equipment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Color	:	colorless
Odor	:	slight
Odor Threshold	:	not determined
Melting point/freezing point	:	Not applicable
Boiling point/boiling range	:	> 200 °C
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Flash point	:	150 °C
Autoignition temperature	:	Not applicable
Decomposition temperature	:	No data available
pH	:	4 - 6 Concentration: 1 %
Viscosity		
Viscosity, dynamic	:	700 - 1.000 mPa.s (25 °C)
Viscosity, kinematic	:	not determined
Solubility(ies)		
Water solubility	:	not determined
Solubility in other solvents	:	not determined
Partition coefficient: n-octanol/water	:	No data available
Vapor pressure	:	not determined

Density	:	1,12 g/cm3 (25 °C)
Bulk density	:	not determined
Relative vapor density	:	not determined
Particle characteristics		
Particle size	:	Not applicable

9.2 Other information

Explosives	:	Not applicable
Oxidizing properties	:	Not applicable
Evaporation rate	:	not determined
Surface tension	:	not determined
Sublimation point	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : Incompatible with oxidizing agents.

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

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

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2.000 mg/kg Method: Calculation method
Acute toxicity (other routes of administration)	:	Remarks: No data available

Components:

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

Acute oral toxicity	:	LD50 (Rat, female): > 2.000 mg/kg Method: OECD Test Guideline 420 GLP: yes
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg Method: OECD Test Guideline 402 GLP: yes

Skin corrosion/irritation

Product:

Remarks	:	No data available

Components:

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

Species	:	Rabbit
Exposure time	:	4 h
Method	:	OECD Test Guideline 404
Result	:	Skin irritation
GLP	:	yes

Serious eye damage/eye irritation

Product:

Remarks	:	No data available

Respiratory or skin sensitization

Product:

Remarks	:	No data available

Components:

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

Test Type	:	Mouse Local Lymph Node assay (LLNA)
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	May cause sensitization by skin contact.
GLP	:	yes

Carcinogenicity

Product:

Remarks : No data available

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on fetal development : Remarks: No data available

STOT-single exposure

Product:

Remarks : No data available

STOT-repeated exposure

Product:

Remarks : No data available

Repeated dose toxicity

Product:

Remarks : No data available

Aspiration toxicity

Components:

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

No aspiration toxicity classification

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

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

Components:

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

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia): 1,7 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

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

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

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

Components:

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

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301F

GLP: yes

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

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

Partition coefficient: n-octanol/water : log Pow: 3,242 (25 °C)
pH: 7,1
Method: OECD Test Guideline 117
GLP: yes

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

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

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : In accordance with local and national regulations.
Container hazardous when empty.
Do not dispose of with domestic refuse.
Do not mix waste streams during collection.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN : UN 3082

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

ADR/RID/ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(bis-[4-(2,3-epoxipropoxi)phenyl]propane)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(bis-[4-(2,3-epoxipropoxi)phenyl]propane)

IATA : Environmentally hazardous substance, liquid, n.o.s.
(bis-[4-(2,3-epoxipropoxi)phenyl]propane)

14.3 Transport hazard class(es)

ADR/RID/ADN : 9

IMDG : 9

IATA : 9

14.4 Packing group

ADR/RID/ADN

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : -
Remarks : ADR: These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IMDG

Packing group : III
Labels : 9
EmS Code : F-A, S-F
Remarks : IMDG Code segregation group - none
IMDG: Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to

any other provisions of this Code relevant to marine pollutants provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. In thecase of marine pollutants also meeting the criteria for inclusion in another hazard class all provisions of this Code relevant to any additional hazards continue to apply.

IATA (Cargo)

Packing instruction (cargo aircraft)	:	964
Packing instruction (LQ)	:	Y964
Packing group	:	III
Labels	:	Miscellaneous Dangerous Goods
Remarks	:	IATA: These substances when transported in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less far liquids or having a net mass of 5 kg or less for solids, are not subject to any other provisions of these Regulations provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

IATA (Passenger)

Packing instruction (passenger aircraft)	:	964
Packing instruction (LQ)	:	Y964
Packing group	:	III
Labels	:	Miscellaneous Dangerous Goods

14.5 Environmental hazards

ADR/RID/ADN

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

Remarks : The transport of dangerous goods, including their loading and unloading, must be done by people who received the necessary training required by Modal Regulations.

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on : Conditions of restriction for the fol-

the market and use of certain dangerous substances, mixtures and articles (Annex XVII)		lowing entries should be considered: Number on list: 3
REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59).	:	Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors		
	:	Not applicable
International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors	:	Not applicable
Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	E2	ENVIRONMENTAL HAZARDS

Other regulations : For the product composition, we do not add any of the substances listed in the European Directive 2011/65/EU (RoHS 2, RoHS 3, and China RoHS).
The product is thus in line with those directives.
We do not add Conflict minerals to the product.

15.2 Chemical Safety Assessment

Not applicable

SECTION 16: Other information

Full text of H-Statements

H302	:	Harmful if swallowed.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H360F	:	May damage fertility.
H361f	:	Suspected of damaging fertility.
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.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity

Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Irrit.	:	Eye irritation
Repr.	:	Reproductive toxicity
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitization

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Training advice	:	Provide adequate information, instruction and training for operators.
Other information	:	Sections, highlighted in grey, indicates changes towards the previous version.
Sources of key data used to compile the Material Safety Data Sheet	:	Information taken from reference works and the literature. See the list mentioned above.

Classification of the mixture:		**Classification procedure:**
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method

Repr. 1B	H360F	Calculation method
Aquatic Chronic 2	H411	Calculation method

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

REG_EU / EN

GlassCast® 50 Epoxy Hardener

Version	Revision Date:	Date of last issue: 18.11.2020
8.0 SDB_GB	03.08.2022	Date of first issue: 27.12.2012

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

1.1 Product identifier

Trade name : GlassCast 50 Epoxy Hardener

UFI : SA32-495H-G00R-E0Q2

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

Type of Application (Use) : Epoxy Hardener

Recommended restrictions on use : Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company name: Easy Composites Ltd
Unit 39, Park Hall Business Village
Longton, Stoke on Trent
Staffordshire
ST3 5XA
United Kingdom

Tel: +44 (0) 1782 454499

Email: sales@easycomposites.co.uk

1.4 Emergency telephone number

+44 (0) 1782 454499
(office hours only)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin corrosion, Sub-category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :
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 :

Prevention:

P261 Avoid breathing mist or vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

Hazardous components which must be listed on the label:

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

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine

3-aminomethyl-3,5,5-trimethylcyclohexylamine

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Aliphatic Amine

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Poly[oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)-	9046-10-0 01-2119557899-12	Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 50 - <= 100
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine	38294-64-3 500-101-4 01-2119965165-33-0011	Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Chronic 3; H412	>= 20 - < 25
benzyl alcohol	100-51-6 202-859-9 603-057-00-5 01-2119492630-38	Acute Tox. 4; H302 Acute Tox. 4; H332 Eye Irrit. 2; H319	>= 10 - < 12,5
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2 220-666-8 612-067-00-9 01-2119514687-32	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Chronic 3; H412 --- specific concentration limit Skin Sens. 1A; H317 >= 0,001 % --- Acute toxicity estimate Acute oral toxicity: 1.030 mg/kg	>= 7 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Show this safety data sheet to the doctor in attendance.

Keep warm and in a quiet place.
Take off all contaminated clothing immediately.

If inhaled : Move to fresh air.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact : Wash off immediately with soap and plenty of water.
Do NOT use solvents or thinners.
If on clothes, remove clothes.
Burns must be treated by a physician.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If eye irritation persists, consult a specialist.
If easy to do, remove contact lens, if worn.

If swallowed : Do NOT induce vomiting.
If a person vomits when lying on his back, place him in the recovery position.
Call a physician immediately.
Give small amounts of water to drink.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Burn
superficial burning sensation
Redness
Severe irritation

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO2)
Foam
Dry powder
Water mist

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : The pressure in sealed containers can increase under the influence of heat.
Cool closed containers exposed to fire with water spray.

Hazardous decomposition products formed under fire conditions.

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Further information : In the event of fire and/or explosion do not breathe fumes.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Immediately evacuate personnel to safe areas.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Refer to protective measures listed in sections 7 and 8.
Evacuate personnel to safe areas.
Use personal protective equipment.
Ensure adequate ventilation.
Inform the responsible authorities in case of gas leakage, or of entry into waterways, soil or drains.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

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

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapours or spray mist.

Avoid inhalation, ingestion and contact with skin and eyes.
Wear personal protective equipment.
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. To maintain product quality, do not store in heat or direct sunlight.

Further information on storage conditions : Protect from moisture.

Advice on common storage : Keep away from isocyanates.
Do not store near acids.
Keep away from oxidizing agents.

Further information on storage stability : Stable at normal ambient temperature and pressure.

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.
Contains no substances with occupational exposure limit values.

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Poly[oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)-	Workers	Skin contact	Long-term systemic effects	2,5 mg/kg
	Workers	Skin contact	Long-term local effects	0,623 mg/cm2
	Consumers	Skin contact	Long-term systemic effects	1,25 mg/kg
	Consumers	Skin contact	Long-term local ef-	0,311 mg/cm2

			fects	
	Consumers	Ingestion	Long-term systemic effects	0,04 mg/kg
benzyl alcohol	Workers	Inhalation	Short-term exposure, Systemic effects	450 mg/m3
	Workers	Inhalation	Long-term exposure, Systemic effects	90 mg/m3
	Workers	Skin contact	Short-term exposure, Systemic effects	47 mg/kg
	Workers	Skin contact	Long-term exposure, Systemic effects	9,5 mg/kg
	Consumers	Ingestion	Short-term exposure, Systemic effects	25 mg/kg
	Consumers	Ingestion	Long-term exposure, Systemic effects	5 mg/kg
	Consumers	Inhalation	Short-term exposure, Systemic effects	40,55 mg/m3
	Consumers	Inhalation	Long-term exposure, Systemic effects	8,11 mg/m3
	Consumers	Skin contact	Short-term exposure, Systemic effects	28,5 mg/kg
	Consumers	Skin contact	Long-term exposure, Systemic effects	5,7 mg/kg
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine	Workers	Inhalation	Long-term systemic effects	0,493 mg/m3
	Workers	Dermal	Long-term systemic effects	0,14 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0,074 mg/m3
	Consumers	Dermal	Long-term systemic effects	0,05 mg/m3
	Consumers	Oral	Long-term systemic effects	0,05 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Poly[oxy(methyl-1,2-ethanediyl)], α-(2-aminomethylethyl)-ω-(2-aminomethylethoxy)-	Fresh water	0,015 mg/l
	Marine water	0,0143 mg/l
	Fresh water sediment	0,132 mg/kg
	Marine sediment	0,125 mg/kg
	Soil	0,0176 mg/kg
	Intermittent releases	0,15 mg/l
	Sewage treatment plant	7,5 mg/l
benzyl alcohol	Fresh water	1 mg/l

	Marine water	0,1 mg/l
	Fresh water sediment	5,27 mg/kg
	Marine sediment	0,527 mg/kg
	Soil	0,456 mg/kg
	Sewage treatment plant	39 mg/l
	Intermittent releases	2,3 mg/l
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Fresh water	0,06 mg/l
	Marine water	0,006 mg/l
	Intermittent releases	0,23 mg/l
	Fresh water sediment	5,784 mg/kg
	Marine sediment	0,578 mg/kg
	Sewage treatment plant	3,18 mg/l
	Soil	1,121 mg/kg
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine	Fresh water	0,011 mg/l
	Marine water	0,001 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	4320 mg/kg
	Marine sediment	432 mg/kg
	Soil	864 mg/kg

8.2 Exposure controls

Engineering measures

Effective exhaust ventilation system
effective ventilation in all processing areas

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166
Do not wear contact lenses.
Ensure that eyewash stations and safety showers are close to the workstation location.

Hand protection
Material : Protective gloves complying with EN 374.

Remarks : Nitrile rubber

Skin and body protection : Protective suit
Recommended preventive skin protection

Respiratory protection : Use respirator when performing operations involving potential exposure to vapour of the product.
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
Recommended Filter type:
ABEK-filter

Equipment should conform to EN 14387

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	light yellow
Odour	:	ammoniacal
Odour Threshold	:	not determined
Melting point/freezing point	:	Not applicable
Boiling point/boiling range	:	> 200 °C
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Flash point	:	100 °C
Ignition temperature	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Method: No data available
pH	:	11 Concentration: 1 %
Viscosity		
Viscosity, dynamic	:	180 - 300 mPa.s (25 °C)
Viscosity, kinematic	:	not determined
Solubility(ies)		
Water solubility	:	not determined
Solubility in other solvents	:	not determined
Partition coefficient: n-octanol/water	:	No data available

Vapour pressure	:	not determined
Density	:	1 g/cm3 (25 °C)
Bulk density	:	not determined
Relative vapour density	:	not determined
Particle characteristics		
Particle size	:	Not applicable

9.2 Other information

Explosives	:	Not applicable
Oxidizing properties	:	Not applicable
Self-ignition	:	Not applicable
Evaporation rate	:	not determined
Surface tension	:	not determined
Sublimation point	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Reacts with the following substances:
Acids
Strong oxidizing agents

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : Strong acids
Strong oxidizing agents

10.6 Hazardous decomposition products

This product may release the following:
Nitrogen oxides (NOx)
Carbon monoxide
Carbon dioxide (CO2)

SECTION 11: Toxicological information

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

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute toxicity (other routes of administration) : Remarks: No data available

Components:

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

Acute oral toxicity : LD50 (Rat, male and female): 2.885,3 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute dermal toxicity : LD50 (Rabbit, male and female): 2.979,7 mg/kg
Method: OECD Test Guideline 402
GLP: yes

benzyl alcohol:

Acute inhalation toxicity : LC50 (Rat, male and female): 4 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Acute oral toxicity : Acute toxicity estimate: 1.030 mg/kg
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

Skin corrosion/irritation

Product:

Remarks : No data available

Components:

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

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Corrosive

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine**:**

Species	:	human skin
Assessment	:	Causes burns.
Method	:	OECD Test Guideline 431
Result	:	Causes burns.
GLP	:	yes

benzyl alcohol:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes

Serious eye damage/eye irritation

Product:

Remarks : No data available

Components:

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

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

benzyl alcohol:

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

Respiratory or skin sensitisation

Product:

Remarks : No data available

Components:

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine**:**

Assessment : May cause sensitisation by skin contact.

Germ cell mutagenicity

Components:

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine**:**

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Carcinogenicity

Product:

Remarks : No data available

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine**:**

Effects on foetal development : Test Type: Pre-natal
Species: Rat
Strain: Sprague-Dawley
Application Route: Oral
General Toxicity Maternal: NOAEL: 100 mg/kg body weight
Teratogenicity: NOAEL: 250 mg/kg body weight
Developmental Toxicity: NOAEL: 250 mg/kg body weight
Embryo-foetal toxicity: NOAEL: 250 mg/kg body weight
Method: OECD Test Guideline 414
GLP: yes

STOT - single exposure

Product:

Remarks : No data available

STOT - repeated exposure

Product:

Remarks : No data available

Repeated dose toxicity

Product:

Remarks : No data available

Components:

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine**:**

Species	:	Rat, male and female
NOAEL	:	10 mg/kg
LOAEL	:	100 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Method	:	OECD Test Guideline 408
GLP	:	yes

Species	:	Rat, male and female
NOAEL	:	30 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Method	:	OECD Test Guideline 407
GLP	:	yes

Aspiration toxicity

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

No aspiration toxicity classification

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

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

Components:

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

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 15 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 80 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): 0,32 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine**:**

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 70,7 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 11,1 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): 79,4 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms	:	(activated sludge): > 1.000 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 GLP: yes

benzyl alcohol:

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 230 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 770 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 110 mg/l Exposure time: 96 h Test Type: semi-static test Method: Directive 67/548/EEC, Annex V, C.1. GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 23 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	ErC50 (Scenedesmus capricornutum (fresh water algae)): > 50 mg/l Exposure time: 72 h Test Type: static test Method: Directive 67/548/EEC, Annex V, C.3. GLP: yes
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 3 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: semi-static test GLP: yes

12.2 Persistence and degradability

Product:

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

Components:

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

Biodegradability : Test Type: aerobic
Result: Not readily biodegradable.
Method: OECD Test Guideline 301B
GLP: yes

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine**:**

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Result: Not biodegradable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Biodegradability : Test Type: aerobic
Result: Not readily biodegradable.
Method: Directive 67/548/EEC Annex V, C.4.A.
GLP: yes

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

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

Partition coefficient: n-octanol/water : log Pow: 1,34 (25 °C)
Method: OECD Test Guideline 117
GLP: yes

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine**:**

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 5,13
Method: estimated

Partition coefficient: n-octanol/water : log Pow: 3,6 (25 °C)
pH: 7
Method: Regulation (EC) No. 440/2008, Annex, A.8
GLP: no

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Partition coefficient: n- : log Pow: 0,99

octanol/water	Method: OECD Test Guideline 107 GLP: yes

12.4 Mobility in soil

Components:

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine**:**

Distribution among environmental compartments	:	log Koc: > 5,16 Method: OECD Test Guideline 121

12.5 Results of PBT and vPvB assessment

Product:

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

12.6 Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN	:	UN 2735
IMDG	:	UN 2735
IATA	:	UN 2735

14.2 UN proper shipping name

ADR/RID/ADN	:	AMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxypropylene Diamine)
IMDG	:	AMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxypropylene Diamine)
IATA	:	Amines, liquid, corrosive, n.o.s. (Polyoxypropylene Diamine)

14.3 Transport hazard class(es)

ADR/RID/ADN	:	8
IMDG	:	8
IATA	:	8

14.4 Packing group

ADR/RID/ADN

Packing group	:	III
Classification Code	:	C7
Hazard Identification Number	:	80
Labels	:	8
Tunnel restriction code	:	E

IMDG

Packing group	:	III
Labels	:	8
EmS Code	:	F-A, S-B
Remarks	:	IMDG Code segregation group 18 - Alkalis

IATA (Cargo)

Packing instruction (cargo aircraft)	:	856
Packing group	:	III
Labels	:	Corrosive

IATA (Passenger)

Packing instruction (passenger aircraft)	:	852
Packing instruction (LQ)	:	Y841
Packing group	:	III
Labels	:	Corrosive

14.5 Environmental hazards

ADR/RID/ADN

Environmentally hazardous	:	no

IMDG

Marine pollutant	:	no

14.6 Special precautions for user

Remarks : The transport of dangerous goods, including their loading and unloading, must be done by people who received the necessary training required by Modal Regulations.

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list: 3
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors	:	Not applicable
International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors	:	Not applicable
Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	Not applicable
Seveso III Directive (2012/18/EU) implemented by Control of Major Accident Hazards Regulations 2015 (COMAH)	Not applicable

15.2 Chemical safety assessment

Not applicable

SECTION 16: Other information

Full text of H-Statements

H302	:	Harmful if swallowed.
H312	:	Harmful in contact with skin.
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.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

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

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

stance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Training advice : Provide adequate information, instruction and training for operators.

Classification of the mixture:		**Classification procedure:**
Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 3	H412	Calculation method

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

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