

EVO-STIK EPOXY RAPID METAL - RESIN
Supersedes Date: 14-Nov-2018

Revision Date 14-Nov-2018
Revision Number 1

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

1.1. Product Identifier

Product Name EVO-STIK EPOXY RAPID METAL - RESIN
Pure substance/mixture Mixture

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

Recommended use Resin.
Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Company Name

Bostik SA
Immeuble "Le Jade"
253 Avenue du President Wilson
93211 La Plaine Saint Denis
France
Tel: +33 (0)1 55 99 90 00
Fax: +33 (0)1 55 99 90 01

E-mail address SDS.box-EU@bostik.com

1.4. Emergency telephone number

United Kingdom +44 (1785) 272650
Ireland +353 (1) 8624900 (Monday- Friday 9am-5pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Skin sensitisation	Category 1 - (H317)
Chronic aquatic toxicity	Category 2 - (H411)

2.2. Label Elements

Contains: Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW



Signal word
Warning

Hazard statements

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H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements

P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children
P273 - Avoid release to the environment
P280 - Wear protective gloves and eye/face protection
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P337 + P313 - If eye irritation persists: Get medical advice/attention
P391 - Collect spillage
P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other Hazards

No information available

PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1 Substances

Mixture

3.2 Mixtures

Chemical Name	EC No.	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	REACH Registration Number
Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW	500-033-5	25068-38-6	80 - 100	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) Aquatic Chronic 2 (H411)	Eye Irrit. 2 :: C>=5% Skin Irrit. 2 :: C>=5%	01-2119456619-26-xxxx

Full text of H- and EUH-phrases: see section 16

Note: ^ indicates not classified, however, the substance is listed in section 3 as it has an OEL

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Take a copy of the Safety Data Sheet when going for medical treatment.

Inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention.

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Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Clean mouth with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person.

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

Symptoms No information available.

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

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Full water jet. Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Thermal decomposition can lead to release of toxic and corrosive gases/vapours.

5.3. Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes or clothing.

Other information Ventilate the area. Prevent further leakage or spillage if safe to do so.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. Do not allow to enter into soil/subsoil. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

Specific Use(s)
Resin.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Other information Observe technical data sheet.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL) No information available

Derived No Effect Level (DNEL)

Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW (25068-38-6)

Type	Worker Short term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	8.33 mg/kg bw/d

Type	Worker Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	8.33 mg/kg bw/d

Type	Worker Short term Systemic health effects
Exposure route	Inhalation
Derived No Effect Level (DNEL)	12.25 mg/kg bw/d

Derived No Effect Level (DNEL)

Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW (25068-38-6)

Type	Consumer Short term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	3.571 mg/kg bw/d

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Type	Consumer Short term Systemic health effects
Exposure route	Oral
Derived No Effect Level (DNEL)	0.75 mg/kg bw/d

Type	Consumer Long term Systemic health effects
Exposure route	Dermal
Derived No Effect Level (DNEL)	3.571 mg/kg bw/d

Type	Consumer Long term Systemic health effects
Exposure route	Oral
Derived No Effect Level (DNEL)	0.75 mg/kg bw/d

Predicted No Effect Concentration (PNEC) No information available.

Predicted No Effect Concentration (PNEC)	
Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW (25068-38-6)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.006 mg/l
Marine water	0.0006 mg/l
Freshwater sediment	0.996 mg/l
Marine sediment	0.0996 mg/l
Soil	0.196 mg/l

8.2. Exposure controls

Engineering controls Ensure adequate ventilation, especially in confined areas. Please refer also to Safety Data Sheet of Part B.

Personal Protective Equipment

Eye/face protection Wear safety glasses with side shields (or goggles).
Hand protection Wear protective gloves: Nitrile rubber, Butyl rubber. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.
Skin and body protection Wear suitable protective clothing.
Respiratory protection Ensure adequate ventilation, especially in confined areas.

Environmental exposure controls Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid
Appearance Paste
Colour dark brown
Odour No information available
Odour Threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	
Melting point / freezing point	No data available	
Boiling point / boiling range	> 250 °C	
Flash Point	250 °C	
Evaporation Rate	No data available	
Flammability (solid, gas)	No data available	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive	No data available	

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limits	
Vapour Pressure	No data available
Vapour Density	No data available
Relative Density	No data available
Water Solubility	Insoluble in water
Solubility(ies)	No data available
Partition coefficient	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Kinematic Viscosity	> 21 mm ² /s @ 40 °C
Dynamic Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available

9.2. Other information

Solid content (%)	82.13
Softening Point	No information available
Molecular Weight	No information available
VOC (volatile organic compound)	No information available
Density	1.1 g/cm ³
Bulk Density	No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion Data

Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None under normal use conditions. Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

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Inhalation	Based on available data, the classification criteria are not met.
Eye contact	Causes serious eye irritation.
Skin contact	Irritating to skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	Based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

No information available

Acute Toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW 25068-38-6	LD50 (rat) > 2000 mg/kg OECD 420	>2000 mg/Kg (rat)	

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Not considered to be harmful to aquatic life.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Micro-organisms	Crustacea	M-Factor
Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW 25068-38-6	EC50 (72h) = 9.4 mg/L (Scenedesmus capricornutum)	1.2 mg/l 96Hr (Oncorhynchus mykiss)	-	2.7 mg/l 48hr Daphia Magna	-

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	EPA-660/3-75-009				
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12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

Chemical Name	Partition coefficient	Bioconcentration factor (BCF)
Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW 25068-38-6	3.26	31

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment . The components in this formulation do not meet the criteria for classification as PBT or vPvB.

Chemical Name	PBT and vPvB assessment
Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW 25068-38-6	The substance is not PBT / vPvB

12.6. Other adverse effects

Other Adverse Effects No information available.

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances
Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW	Group III Chemical	-

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of contents/ container to an approved landfill.

Contaminated packaging Do not reuse empty containers. Handle contaminated packages in the same way as the product itself.

Waste codes / waste designations according to EWC / AVV Waste codes should be assigned by the user based on the application for which the product was used.

European Waste Catalogue 08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances

Other information Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

Land transport (ADR/RID)

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14.1 UN Number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s (Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW)
14.3 Transport hazard class(es)	9
Labels	9
14.4 Packing Group	III
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s (Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW), 9, III
14.5 Environmental hazards	Yes
14.6 Special Provisions	274, 335, 601, 375
Classification Code	M6
Limited Quantity (LQ)	5 L
ADR Hazard Id (Kemmler Number)	90

IMDG

14.1 UN Number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s (Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW), Marine Pollutant
14.3 Transport hazard class(es)	9
14.4 Packing Group	III
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s (Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW), 9, III, Marine Pollutant
14.5 Marine Pollutant	P
14.6 Special Provisions	274, 335, 969
Limited Quantity (LQ)	5 L
EmS-No.	F-A, S-F
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

Air transport (ICAO-TI / IATA-DGR)

14.1 UN Number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substances, liquid, n.o.s (Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW)
14.3 Transport hazard class(es)	9
14.4 Packing Group	III
Description	UN3082, Environmentally hazardous substances, liquid, n.o.s (Bisphenol-A-Epichlorhydrin Epoxy resin <= 700 MW), 9, III
14.5 Environmental hazards	Yes
14.6 Special Provisions	A97, A158, A197
Limited Quantity (LQ)	30 kg G
ERG Code	9L

Section 15: REGULATORY INFORMATION

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

EU-REACH (1907/2006) - Candidate List of Substances of Very High Concern (SVHC) for Authorization in accordance with Article 59

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This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction

This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

EU-REACH (1907/2006) - Annex XIV - List of substances subject to Authorization

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

Dangerous substance category per Seveso Directive (2012/18/EU)

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Persistent Organic Pollutants

Not applicable

15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out by the Reach registrants for substances registered at >10 tpa. No Chemical Safety Assessment has been carried out for this mixture

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H315 - Causes skin irritation
H319 - Causes serious eye irritation
H317 - May cause an allergic skin reaction
H411 - Toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend SECTION 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals		
STOT RE	Specific target organ toxicity - Repeated exposure		
STOT SE	Specific target organ toxicity - Single exposure		
EWC:	European Waste Catalogue		

Key literature references and sources for data

Classification and labeling data calculated from data received from raw material suppliers

Prepared By Product Safety & Regulatory Affairs

Revision Date 14-Nov-2018

Indication of changes

Revision note Not applicable.

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Training Advice When working with hazardous materials, regular training of operators is required by law

Further information No information available

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

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

1.1. Product Identifier

Product Name EVO-STIK EPOXY RAPID METAL - HARDENER
Pure substance/mixture Mixture

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

Recommended use Curing chemical.
Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Company Name

Bostik SA
Immeuble "Le Jade"
253 Avenue du President Wilson
93211 La Plaine Saint Denis
France
Tel: +33 (0)1 55 99 90 00
Fax: +33 (0)1 55 99 90 01

E-mail address SDS.box-EU@bostik.com

1.4. Emergency telephone number

United Kingdom +44 (1785) 272650
Ireland +353 (1) 8624900 (Monday- Friday 9am-5pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin sensitisation	Category 1 - (H317)
Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label Elements

Contains: Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulfide, 1,4-Benzenediol



Signal word
Warning

Hazard statements
H317 - May cause an allergic skin reaction

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H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

P102 - Keep out of reach of children
P273 - Avoid release to the environment
P280 - Wear protective gloves
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P101 - If medical advice is needed, have product container or label at hand
P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other Hazards

No information available

PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1 Substances

Mixture

3.2 Mixtures

Chemical Name	EC No.	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	REACH Registration Number
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulfide	701-196-7	--	80 - 100	Skin Sens. 1 (H317) Aquatic Chronic 3 (H412)		01-2120118957-46-xxxx
1,3-bis[3-(dimethylamino)propyl]urea	257-861-2	52338-87-1	5 - <10	Eye Irrit. 2 (H319) Skin Irrit. 2 (H315)		No data available
1,4-Benzenediol	204-617-8	123-31-9	0.1 - <1	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Muta. 2 (H341) Carc. 2 (H351) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (M Factor Acute = 10) (M Factor Chronic =1)		01-2119524016-51-XXXX

Full text of H- and EUH-phrases: see section 16

Note: ^ indicates not classified, however, the substance is listed in section 3 as it has an OEL

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No.

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1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Take a copy of the Safety Data Sheet when going for medical treatment.
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Clean mouth with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person.

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

Symptoms No information available.

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

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	Full water jet. Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Thermal decomposition can lead to release of toxic and corrosive gases/vapours.

5.3. Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Avoid contact with skin, eyes or clothing.
Other information	Ventilate the area. Prevent further leakage or spillage if safe to do so.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Do not flush into surface water or sanitary sewer system. Do not allow to enter into

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soil/subsoil. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep away from food, drink and animal feedingstuffs.

7.3. Specific end use(s)

Specific Use(s)
Curing chemical.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Other information Observe technical data sheet.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Chemical Name	European Union	Ireland	United Kingdom
1,4-Benzenediol 123-31-9	-	TWA: 0.5 mg/m ³ STEL: 1.5 mg/m ³	TWA: 0.5 mg/m ³ STEL: 1.5 mg/m ³

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

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Engineering controls Ensure adequate ventilation, especially in confined areas. Please refer also to Safety Data Sheet of Part A.

Personal Protective Equipment

Eye/face protection Wear safety glasses with side shields (or goggles).
Hand protection Wear suitable gloves: Nitrile rubber. Butyl rubber. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.
Skin and body protection Wear suitable protective clothing.
Respiratory protection Ensure adequate ventilation, especially in confined areas.

Environmental exposure controls Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid
Appearance No information available
Colour White
Odour Characteristic
Odour Threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	
Melting point / freezing point	No data available	
Boiling point / boiling range	> 250 °C	
Flash Point	250 °C	
Evaporation Rate	No data available	
Flammability (solid, gas)	No data available	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour Pressure	No data available	
Vapour Density	No data available	
Relative Density	No data available	
Water Solubility	Insoluble in water	
Solubility(ies)	No data available	
Partition coefficient	No data available	
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Kinematic Viscosity	> 21 mm ² /s	@ 40 °C
Dynamic Viscosity	No data available	
Explosive properties	No data available	
Oxidising properties	No data available	

9.2. Other information

Solid content (%) 95.32
Softening Point No information available
Molecular Weight No information available
VOC (volatile organic compound) 0 g/L European directive n°2010/75/UE
Density 1.05 g/cm³
Bulk Density No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

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10.2. Chemical stability

Stability Stable under normal conditions.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition can lead to release of toxic/corrosive gases and vapours. Ammonia. Amines.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product information

Inhalation Based on available data, the classification criteria are not met.

Eye contact Based on available data, the classification criteria are not met.

Skin contact Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Based on available data, the classification criteria are not met.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

No information available

Acute Toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulfide	=2000-4600 mg/Kg (Rat) (OECD 401)	>10,000 mg/Kg (Rabbit) (OECD 402)	

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1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	LD50 >5000 mg/Kg		
1,4-Benzenediol 123-31-9	= 298 mg/kg (Rat)	= 74800 mg/kg (Rabbit)	

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Chemical Name	European Union
1,4-Benzenediol 123-31-9	Muta. 2

Carcinogenicity Based on available data, the classification criteria are not met.

Chemical Name	European Union
1,4-Benzenediol 123-31-9	Carc. 2

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Not considered to be harmful to aquatic life.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Micro-organisms	Crustacea	M-Factor
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulfide --	-	LD50 (96h) =87 mg/L Fish (Danio rerio) (OECD 203)	-	EC50 (48h) =12mg/L Daphnia magna (OECD 202)	-
1,4-Benzenediol 123-31-9	EC50: =0.335mg/L (72h, Pseudokirchneriella subcapitata) EC50: =13.5mg/L (120h, Desmodosmus subspicatus)	LC50 96 h = 0.044 mg/L (Oncorhynchus mykiss flow-through)	EC50 = 0.038 mg/L 15 min EC50 = 0.0382 mg/L 30 min EC50 = 0.042 mg/L 5 min EC50 = 23.75 mg/L 60 min	EC50: =0.29mg/L (48h, Daphnia magna)	-

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12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

Chemical Name	Partition coefficient	Bioconcentration factor (BCF)
1,4-Benzenediol 123-31-9	0.5	40

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment . The components in this formulation do not meet the criteria for classification as PBT or vPvB.

Chemical Name	PBT and vPvB assessment
1,3-bis[3-(dimethylamino)propyl]urea 52338-87-1	The substance is not PBT / vPvB
1,4-Benzenediol 123-31-9	The substance is not PBT / vPvB PBT assessment does not apply

12.6. Other adverse effects

Other Adverse Effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of contents/ container to an approved landfill.

Contaminated packaging Do not reuse empty containers. Handle contaminated packages in the same way as the product itself.

Waste codes / waste designations according to EWC / AVV Waste codes should be assigned by the user based on the application for which the product was used.

Other information Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1 UN Number Not regulated
14.2 Proper Shipping Name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing Group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special Provisions None

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14.1 UN Number	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Marine Pollutant	Np
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

Air transport (ICAO-TI / IATA-DGR)

14.1 UN Number	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special Provisions	None

Section 15: REGULATORY INFORMATION

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Check whether measures in accordance with Directive 94/33/EC for the protection of young people at work must be taken.

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

EU-REACH (1907/2006) - Candidate List of Substances of Very High Concern (SVHC) for Authorization in accordance with Article 59

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction

This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

EU-REACH (1907/2006) - Annex XIV - List of substances subject to Authorization

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Persistent Organic Pollutants

Not applicable

15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out by the Reach registrants for substances registered at >10 tpa. No

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Chemical Safety Assessment has been carried out for this mixture

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed
H318 - Causes serious eye damage
H317 - May cause an allergic skin reaction
H341 - Suspected of causing genetic defects
H351 - Suspected of causing cancer
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H319 - Causes serious eye irritation
H315 - Causes skin irritation
H412 - Harmful to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend SECTION 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals		
STOT RE	Specific target organ toxicity - Repeated exposure		
STOT SE	Specific target organ toxicity - Single exposure		
EWC	European Waste Catalogue		

Key literature references and sources for data

Classification and labeling data calculated from data received from raw material suppliers

Prepared By Product Safety & Regulatory Affairs

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Indication of changes

Revision note Not applicable.

Training Advice When working with hazardous materials, regular training of operators is required by law

Further information No information available

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet