



Safety Data Sheet

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Revision date:	12/02/2021	Supersedes date:	06/07/2020
Transportation version number:	4.01 (06/07/2020)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

3M Structural Adhesive 08122 (Part A & B)

Product Identification Numbers

FS-9100-3541-9 UU-0105-3198-4

7000080010 7100224387

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

Identified uses

Structural adhesive.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet for each of these components is included. Please do not separate the component Safety Data Sheets from this cover page. The document numbers of the MSDSs for components of this product are:

22-4198-2, 22-4203-0

TRANSPORTATION INFORMATION

FS-9100-3541-9

ADR/RID: UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., LIMITED QUANTITY, (3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), 8, II, (E), ADR Classification Code: C8.

IMDG-CODE: UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., (3,3'-

3M Structural Adhesive 08122 (Part A & B)

OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), 8., II , IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA,SB.

ICAO/IATA: UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., (3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), 8., II .

UU-0105-3198-4

Component 1

ADR/RID: UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION 375, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXEMPTION, (EPOXY RESIN), III, --.

IMDG-CODE: UN3082, NOT RESTRICTED AS PER IMDG CODE 2.10.2.7, MARINE POLLUTANT EXCEPTION, (EPOXY RESIN), III, IMDG-Code segregation code: NONE, EMS: --.

ICAO/IATA: UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION A197, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXCEPTION, (EPOXY RESIN), III.

Component 2

ADR/RID: UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., LIMITED QUANTITY, (3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), 8, II , (E), ADR Classification Code: C8.

IMDG-CODE: UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., (3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), 8., II , IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA,SB.

ICAO/IATA: UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., (3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), 8., II .

KIT LABEL

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Skin Corrosion/Irritation, Category 1B - Skin Corr. 1B; H314

Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318

Skin Sensitization, Category 1 - Skin Sens. 1; H317

Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS05 (Corrosion) | GHS07 (Exclamation mark) | GHS09 (Environment) |

Pictograms



Contains:

Nitric acid, calcium salt, tetrahydrate; bis-[4-(2,3-epoxipropoxy)phenyl]propane; 3,3'-Oxybis(ethyleneoxy)bis(propylamine);

3M Structural Adhesive 08122 (Part A & B)

2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane; 2,4,6-tris(dimethylaminomethyl)phenol

HAZARD STATEMENTS:

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260B Do not breathe dust.
P280D Wear protective gloves, protective clothing, and eye/face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE or doctor/physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

<=125 ml Precautionary statements

Prevention:

P260B Do not breathe dust.
P280D Wear protective gloves, protective clothing, and eye/face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE or doctor/physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

Refer to Safety Data Sheet for component % unknown values (www.3M.com/msds).

Revision information:

Label: CLP Ingredients - kit components information was modified.
Section 2: <125ml Precautionary - Response information was modified.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Response information was modified.



Safety Data Sheet

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Document group:	22-4203-0	Version number:	4.04
Revision date:	12/02/2021	Supersedes date:	01/07/2020

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier

Structural Adhesive P/N 08122 : Part A

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

Identified uses

Toughened structural adhesive.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Skin Corrosion/Irritation, Category 1B - Skin Corr. 1B; H314
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS05 (Corrosion) |GHS07 (Exclamation mark) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	224-207-2	55 - 60
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	216-823-5	15 - 25
Nitric acid, calcium salt, tetrahydrate	13477-34-4	233-332-1	5 - 15
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	202-013-9	5 - 15

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:

P260B	Do not breathe dust.
P280D	Wear protective gloves, protective clothing, and eye/face protection.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml 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.

<=125 ml Precautionary statements

Structural Adhesive P/N 08122 : Part A**Prevention:**

P260B Do not breathe dust.
P280D Wear protective gloves, protective clothing, and eye/face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE or doctor/physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

Contains 2% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	(CAS-No.) 4246-51-9 (EC-No.) 224-207-2	55 - 60	Skin Sens. 1, H317 Skin Corr. 1B, H314
bis-[4-(2,3-epoxipropoxy)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5 (REACH-No.) 01-2119456619-26	15 - 25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Nitric acid, calcium salt, tetrahydrate	(CAS-No.) 13477-34-4 (EC-No.) 233-332-1 (REACH-No.) 01-2119495093-35	5 - 15	Acute Tox. 4, H302 Eye Dam. 1, H318
2,4,6-tris(dimethylaminomethyl)phenol	(CAS-No.) 90-72-2 (EC-No.) 202-013-9 (REACH-No.) 01-2119560597-27	5 - 15	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318
Bis[(dimethylamino)methyl]phenol	(CAS-No.) 71074-89-0 (EC-No.) 275-162-0	< 3	Acute Tox. 4, H302 Skin Corr. 1C, H314

Please see section 16 for the full text of any H statements referred to in this section

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
bis-[4-(2,3-epoxipropoxy)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Eye contact

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If swallowed

Rinse mouth. Do not induce vomiting. Get immediate medical attention.

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

The most important symptoms and effects based on the CLP classification include:

Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

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

Overexposure to this product may result in methemoglobinemia. Methemoglobinemia may be clinically suspected by the presence of clinical "cyanosis" in the presence of a normal PaO₂ (as obtained by arterial blood gases). Routine pulse oximetry may be inaccurate for monitoring oxygen saturation in the presence of methemoglobinemia, and should not be used to make the diagnosis of this disorder. If the patient is symptomatic or if the methemoglobin level is >20%, specific therapy with methylene blue should be considered as part of the medical management. Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.

5.3. Advice for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

Derived no effect level (DNEL)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Dermal, Short-term exposure, Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	12.3 mg/m ³
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Inhalation, Short-term exposure, Systemic effects	12.3 mg/m ³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Freshwater	0.003 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Freshwater sediments	0.5 mg/kg d.w.
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Intermittent releases to water	0.013 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Marine water	0.0003 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Marine water sediments	0.5 mg/kg d.w.
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Sewage Treatment Plant	10 mg/l

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from UK HSC

8.2. Exposure controls

In addition, refer to the annex for more information.

8.2.1. Engineering controls

Curing enclosures must be exhausted to outdoors or to a suitable emission control device.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Full face shield.

Indirect vented goggles.

Applicable Norms/Standards

Use eye/face protection conforming to EN 166

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended:

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	>0.30	> 8 hours

The glove data presented are based on the substance driving dermal toxicity and the conditions present at the time of testing. Breakthrough time may be altered when the glove is subjected to use conditions that place additional stress on the glove.

Applicable Norms/Standards

Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

8.2.3. Environmental exposure controls

Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Colour	White
Odor	Amine
Odour threshold	<i>No data available.</i>
Melting point/freezing point	<i>Not applicable.</i>
Boiling point/boiling range	<i>No data available.</i>
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Flash point	≥ 139 °C [<i>Test Method: Closed Cup</i>]
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
pH	
Kinematic Viscosity	<i>No data available.</i>
Water solubility	<i>No data available.</i>
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Vapour pressure	<i>Not applicable.</i>
Density	<i>No data available.</i>
Relative density	1.09 - 1.12 [<i>Ref Std: WATER=1</i>]
Relative Vapor Density	<i>Not applicable.</i>

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds

No data available.

Evaporation rate

Not applicable.

Percent volatile

Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

Sparks and/or flames.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Substance

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

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

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin contact

May be harmful in contact with skin. Corrosive (skin burns): Signs/symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

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Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion

Harmful if swallowed.

Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen. May cause additional health effects (see below).

Additional Health Effects:**Single exposure may cause target organ effects:**

Methemoglobinemia: Signs/symptoms may include headache, dizziness, nausea, difficulty breathing, and generalised weakness.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE2,000 - 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE300 - 2,000 mg/kg
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Dermal	Rabbit	LD50 2,500 mg/kg
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Rat	LD50 3,160 mg/kg
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
Nitric acid, calcium salt, tetrahydrate	Ingestion	Rat	LD50 >300, <2000 mg/kg
Nitric acid, calcium salt, tetrahydrate	Dermal	similar compounds	LD50 > 2,000 mg/kg
2,4,6-tris(dimethylaminomethyl)phenol	Dermal	Rat	LD50 1,280 mg/kg
2,4,6-tris(dimethylaminomethyl)phenol	Ingestion	Rat	LD50 1,000 mg/kg
Bis[(dimethylamino)methyl]phenol	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Rabbit	Corrosive
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Rabbit	Mild irritant
Nitric acid, calcium salt, tetrahydrate	similar compounds	No significant irritation
2,4,6-tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Bis[(dimethylamino)methyl]phenol	similar compounds	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	similar health hazards	Corrosive
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Rabbit	Moderate irritant
Nitric acid, calcium salt, tetrahydrate	Rabbit	Corrosive
2,4,6-tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Bis[(dimethylamino)methyl]phenol	similar compound	Corrosive

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ds

Skin Sensitisation

Name	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Human and animal	Sensitising
Nitric acid, calcium salt, tetrahydrate	similar compounds	Not classified
2,4,6-tris(dimethylaminomethyl)phenol	Guinea pig	Not classified

Respiratory Sensitisation

Name	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	In vivo	Not mutagenic
bis-[4-(2,3-epoxipropoxy)phenyl]propane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Nitric acid, calcium salt, tetrahydrate	In Vitro	Not mutagenic
2,4,6-tris(dimethylaminomethyl)phenol	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Nitric acid, calcium salt, tetrahydrate	Ingestion	Not classified for female reproduction	similar compounds	NOAEL 1,500 mg/kg/day	prematuring into lactation
Nitric acid, calcium salt, tetrahydrate	Ingestion	Not classified for male reproduction	similar compounds	NOAEL 1,500 mg/kg/day	28 days
Nitric acid, calcium salt, tetrahydrate	Ingestion	Not classified for development	similar compounds	NOAEL 1,500 mg/kg/day	prematuring into lactation

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
------	-------	-----------------	-------	---------	-------------	-------------------

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3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Nitric acid, calcium salt, tetrahydrate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Nitric acid, calcium salt, tetrahydrate	Ingestion	methemoglobinemia	Causes damage to organs	Human	NOAEL Not available	environmental exposure
2,4,6-tris(dimethylaminomethyl)phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Nitric acid, calcium salt, tetrahydrate	Ingestion	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system eyes kidney and/or bladder respiratory system vascular system	Not classified	similar compounds	NOAEL 1,500 mg/kg/day	28 days
2,4,6-tris(dimethylaminomethyl)phenol	Dermal	skin liver nervous system auditory system hematopoietic system eyes	Not classified	Rat	NOAEL 125 mg/kg/day	28 days

Aspiration Hazard

For the component/components, either no data is currently available or the data is not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Bacteria	Experimental	17 hours	EC50	4,000 mg/l
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Golden Orfe	Experimental	96 hours	LC50	>1,000 mg/l
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Green algae	Experimental	72 hours	EC50	>500 mg/l
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Water flea	Experimental	48 hours	EC50	218.16 mg/l
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Green algae	Experimental	72 hours	EC10	5.4 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Activated sludge	Estimated	3 hours	IC50	>100 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Green Algae	Experimental	72 hours	EC50	>11 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Green Algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
Nitric acid, calcium salt, tetrahydrate	13477-34-4	Guppy	Estimated	96 hours	LC50	1,378 mg/l
Nitric acid, calcium salt, tetrahydrate	13477-34-4	Fathead minnow	Estimated	30 days	NOEC	58 mg/l
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Common Carp	Experimental	96 hours	LC50	175 mg/l
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Grass Shrimp	Experimental	96 hours	LC50	718 mg/l
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Green algae	Experimental	72 hours	EC50	84 mg/l
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Green algae	Experimental	72 hours	NOEC	6.25 mg/l
Bis[(dimethylamino)methyl]phenol	71074-89-0		Data not available or insufficient for classification			NA

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Estimated Photolysis		Photolytic half-life (in air)	2.96 hours (t _{1/2})	Non-standard method
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Experimental Biodegradation	25 days	CO ₂ evolution	-8 %CO ₂ evolution/THC	OECD 301B - Modified sturm or CO ₂

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pylamine)					O2 evolution	
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life	117 hours (t _{1/2})	Non-standard method
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
Nitric acid, calcium salt, tetrahydrate	13477-34-4	Data not available - insufficient			N/A	
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Experimental Biodegradation	28 days	BOD	4 % weight	OECD 301D - Closed bottle test
Bis[(dimethylamino)methyl]phenol	71074-89-0	Estimated Biodegradation	28 days	BOD	20 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Experimental Bioconcentration		Log Kow	-1.25	Non-standard method
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	Non-standard method
Nitric acid, calcium salt, tetrahydrate	13477-34-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Experimental Bioconcentration		Log Kow	-0.66	Non-standard method
Bis[(dimethylamino)methyl]phenol	71074-89-0	Estimated Bioconcentration		Log Kow	-2.34	Estimated: Octanol-water partition coefficient

12.4. Mobility in soil

No test data available.

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

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EU waste code (product as sold)

08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances
20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

ADR: UN3263 Corrosive Solid, Basic, Organic, N.O.S. (3,3 -oxybis (ethyleneoxy)bis (propylamine)), class 8, PG II, C8
IATA: UN3263 Corrosive Solid, Basic, Organic, N.O.S. (3,3 -oxybis (ethyleneoxy)bis (propylamine)), class 8, PG II
IMDG: UN3263 Corrosive Solid, Basic, Organic, N.O.S. (3,3 -oxybis (ethyleneoxy)bis (propylamine)), class 8, PG II, EmS: F-A, S-B

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

SECTION 15: Regulatory information

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

Carcinogenicity

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Gr. 3: Not classifiable	International Agency for Research on Cancer

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:

EU Section 09: pH information information was added.
Professional Use of Adhesives and Sealants: Section 16: Annex information was modified.
Section 2: <125ml Precautionary - Response information was modified.
CLP: Ingredient table information was modified.
Label: CLP Classification information was modified.
Label: CLP Precautionary - Response information was modified.
Section 2: Other hazards phrase information was modified.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.

Section 03: SCL table information was added.
Section 03: Substance not applicable information was added.
Section 4: First Aid - notes to physician (REACH/GHS) information was modified.
Section 04: First Aid - Symptoms and Effects (CLP) information was added.
Section 04: Information on toxicological effects information was modified.
Section 8: DNEL table row information was modified.
Section 8: glove data value information was added.
Section 8: glove data value information was modified.
Section 8: PNEC table row information was modified.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 9: Oxidising properties information information was deleted.
Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapor density text information was added.
Section 9: Vapor density text information was deleted.
Section 9: Viscosity information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Classification disclaimer information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: No endocrine disruptor information available warning information was added.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Respiratory Sensitization Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Single exposure may cause standard phrases information was added.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 12: 12.6. Endocrine Disrupting Properties information was added.
Section 12: 12.7. Other adverse effects information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Contact manufacturer for more detail. information was deleted.
Section 12: No Data text for mobility in soil information was added.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocumulative potential information information was modified.
Section 14 Classification Code – Main Heading information was added.
Section 14 Classification Code – Regulation Data information was added.
Section 14 Control Temperature – Main Heading information was added.
Section 14 Control Temperature – Regulation Data information was added.
Section 14 Disclaimer Information information was added.
Section 14 Emergency Temperature – Main Heading information was added.
Section 14 Emergency Temperature – Regulation Data information was added.
Section 14 Hazard Class + Sub Risk – Main Heading information was added.
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
Section 14 Hazardous/Not Hazardous for Transportation information was added.
Section 14 Multiplier – Main Heading information was added.
Section 14 Multiplier – Regulation Data information was added.
Section 14 Other Dangerous Goods – Main Heading information was added.
Section 14 Other Dangerous Goods – Regulation Data information was added.

Section 14 Packing Group – Main Heading information was added.
 Section 14 Packing Group – Regulation Data information was added.
 Section 14 Proper Shipping Name information was added.
 Section 14 Regulations – Main Headings information was added.
 Section 14 Segregation – Regulation Data information was added.
 Section 14 Segregation Code – Main Heading information was added.
 Section 14 Special Precautions – Main Heading information was added.
 Section 14 Special Precautions – Regulation Data information was added.
 Section 14 Transport Category – Main Heading information was added.
 Section 14 Transport Category – Regulation Data information was added.
 Section 14 Transport in bulk – Regulation Data information was added.
 Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.
 Section 14 Transport Not Permitted – Main Heading information was added.
 Section 14 Transport Not Permitted – Regulation Data information was added.
 Section 14 Tunnel Code – Main Heading information was added.
 Section 14 Tunnel Code – Regulation Data information was added.
 Section 14 UN Number Column data information was added.
 Section 14 UN Number information was added.
 Section 15: Carcinogenicity information information was added.

Annex

1. Title	
Substance identification	
Exposure Scenario Name	Professional Use of Adhesives and Sealants
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 13 -Treatment of articles by dipping and pouring ERC 08c -Widespread use leading to inclusion into/onto article (indoor)
Processes, tasks and activities covered	Application of product with applicator gun.
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Duration of use: 8 hours/day; Emission days per year: 365 days/year;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; Environmental: None needed;
Waste management measures	Do not apply industrial sludge to natural soils; Prevent discharge of undissolved substance to or recover from wastewater;
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union,

you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

3M United Kingdom MSDSs are available at www.3M.com/uk



Safety Data Sheet

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Transportation version number:	1.00 (08/06/2012)		

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier

Structural Adhesive P/N 08122 : Part B

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

Identified uses

Toughened structural adhesive.

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

WARNING.

Symbols:

GHS07 (Exclamation mark) |GHS09 (Environment) |

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	216-823-5	60 - 90
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	71033-08-4	275-143-7	5 - 15

HAZARD STATEMENTS:

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

PRECAUTIONARY STATEMENTS

Prevention:

P280E	Wear protective gloves.
P273	Avoid release to the environment.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H317	May cause an allergic skin reaction.
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<=125 ml Precautionary statements

Prevention:

P280E	Wear protective gloves.
-------	-------------------------

Response:

Structural Adhesive P/N 08122 : Part B

P333 + P313

If skin irritation or rash occurs: Get medical advice/attention.

13% of the mixture consists of components of unknown acute oral toxicity.

Contains 27% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

Contains a substance that meets the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII Contains a substance that meets the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	216-823-5	01-2119456619-26	60 - 90	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317 Aquatic Chronic 2, H411
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	71033-08-4	275-143-7		5 - 15	Skin Irrit. 2, H315; Skin Sens. 1, H317
COPOLYMER (BD/STY/MMA)	Non-Material			7 - 13	Substance not classified as hazardous
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	2530-83-8	219-784-2	01-2119513212-58	1 - 5	Eye Dam. 1, H318
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7			1 - 5	Substance with an occupational exposure limit

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation**

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed

Rinse mouth. If you feel unwell, get medical attention.

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

See Section 11.1 Information on toxicological effects

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.

5.3. Advice for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Decontaminate work surfaces frequently to avoid exposure by contact. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

Keep container tightly closed.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Silicon dioxide	67762-90-7	UK HSC	TWA(as respirable dust):2.4 mg/m ³ ;TWA(as inhalable dust):6 mg/m ³	

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

Derived no effect level (DNEL)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Dermal, Short-term exposure, Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	12.3 mg/m ³
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Inhalation, Short-term exposure, Systemic effects	12.3 mg/m ³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Freshwater	0.003 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Freshwater sediments	0.5 mg/kg d.w.
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Intermittent releases to water	0.013 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Marine water	0.0003 mg/l

bis-[4-(2,3-epoxipropoxy)phenyl]propane		Marine water sediments	0.5 mg/kg d.w.
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Sewage Treatment Plant	10 mg/l

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from UK HSC

8.2. Exposure controls

In addition, refer to the annex for more information.

8.2.1. Engineering controls

Curing enclosures must be exhausted to outdoors or to a suitable emission control device. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect vented goggles.

Applicable Norms/Standards

Use eye protection conforming to EN 166

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended:

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	No data available	No data available

Applicable Norms/Standards

Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

In case of inadequate ventilation wear respiratory protection. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure: Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

8.2.3. Environmental exposure controls

Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state

Liquid.

Colour

Off-White

Specific Physical Form:

Paste

Odor

Epoxy

Odour threshold

No data available.

pH

Not applicable.

Boiling point/boiling range

No data available.

Melting point

Not applicable.

Flammability (solid, gas)

Not applicable.

Explosive properties

Not classified

Oxidising properties

Not classified

Flash point

≥ 101 °C [*Test Method: Closed Cup*]

Autoignition temperature

No data available.

Flammable Limits(LEL)

Not applicable.

Flammable Limits(UEL)

Not applicable.

Vapour pressure

Not applicable.

Relative density

1.1 - 1.15 [*Ref Std: WATER=1*]

Water solubility

No data available.

Solubility- non-water

No data available.

Partition coefficient: n-octanol/water

No data available.

Evaporation rate

Not applicable.

Vapour density

Not applicable.

Decomposition temperature

No data available.

Viscosity

No data available.

Density

No data available.

9.2. Other information

EU Volatile Organic Compounds

No data available.

Percent volatile

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic

reaction with production of intense heat and smoke.
Sparks and/or flames.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Substance

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin contact

Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, dryness, cracking, blistering, and pain.
Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	Ingestion	Rat	LD50 > 2,000 mg/kg

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Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Dermal	Rabbit	LD50 4,000 mg/kg
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Rat	LD50 7,010 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Rabbit	Mild irritant
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	In vitro data	Irritant
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Rabbit	Moderate irritant
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	In vitro data	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Human and animal	Sensitising
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	Professional judgement	Sensitising
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Guinea pig	Not classified

Respiratory Sensitisation

Name	Species	Value
bis-[4-(2,3-epoxypropoxy)phenyl]propane	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
bis-[4-(2,3-epoxypropoxy)phenyl]propane	In vivo	Not mutagenic
bis-[4-(2,3-epoxypropoxy)phenyl]propane	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	In vivo	Not mutagenic

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[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
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Carcinogenicity

Name	Route	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Dermal	Mouse	Not carcinogenic

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Not classified for development	Rat	NOAEL 3,000 mg/kg/day	during organogenesis

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	auditory system heart endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

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		hematopoietic system liver eyes kidney and/or bladder				
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	Ingestion	heart endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

Aspiration Hazard

For the component/components, either no data is currently available or the data is not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
bis-[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	Green Algae	Experimental	72 hours	EC50	>11 mg/l
bis-[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	Green Algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	71033-08-4		Data not available or insufficient for classification			
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Common Carp	Experimental	96 hours	LC50	55 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Crustacea other	Experimental	48 hours	LC50	324 mg/l

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[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	EC50	350 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green Algae	Experimental	96 hours	NOEC	130 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Water flea	Experimental	21 days	NOEC	>=100 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life	117 hours (t _{1/2})	Other methods
bis-[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	71033-08-4	Estimated Biodegradation	28 days	BOD	20 % BOD/ThBOD	OECD 301F - Manometric respirometry
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life	6.5 hours (t _{1/2})	Other methods
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 % weight	Other methods
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient			N/A	

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3-epoxypropoxy)phenyl]propane	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	Other methods
2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane	71033-08-4	Estimated BCF - Other		Bioaccumulation factor	6.5	Estimated: Bioconcentration factor
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities. Proper destruction may require the use of additional fuel during incineration processes.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

EU waste code (product as sold)

08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances
20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

Exemption: For vessels containing a net quantity of 5 l or a net mass of 5 kg or less per single or inner packaging, special provision 375 (ADR), exemption per 2.10.2.7 (IMDG) or special provision A197 (IATA) may be applied, if applicable
ADR: UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LIQUID EPOXY RESIN); 9; III; (-); M6.

IATA: UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LIQUID EPOXY RESIN); 9; III.
IMDG: UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LIQUID EPOXY RESIN); 9; III; Marine Pollutant: LIQUID EPOXY RESIN; FA, SF.

SECTION 15: Regulatory information

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

Carcinogenicity

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Gr. 3: Not classifiable	International Agency for Research on Cancer

Ingredient

CAS Nbr

Authorization status: listed in the Candidate List of Substances of Very High Concern for Authorization

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

Revision information:

Industrial Mixing and Application: Section 16: Annex information was modified.
Industrial Transfer: Section 16: Annex information was modified.
Professional Application of Adhesives and Sealants: Section 16: Annex information was deleted.
Professional Use of Adhesives and Sealants: Section 16: Annex information was added.
CLP: Ingredient table information was modified.
Label: CLP Percent Unknown information was modified.
Section 2: Other hazards phrase information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 5: Fire - Advice for fire fighters information information was modified.
Section 5: Hazardous combustion products table information was modified.
Section 6: Accidental release personal information information was modified.
Section 8: DNEL table row information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 8: Personal Protection - Skin/hand information information was modified.
Section 8: PNEC table row information was modified.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 09: Color information was added.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: Reproductive and/or Developmental Effects text information was deleted.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Respiratory Sensitization Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Specific Target Organ Toxicity - single exposure text information was deleted.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was added.
Section 12: Component ecotoxicity information information was modified.
Section 12: No PBT/vPvB information available warning information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocummulative potential information information was modified.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14: Transportation classification information was modified.
Section 15: Carcinogenicity information information was added.
Section 15: Chemical Safety Assessment information was modified.
Section 15: Regulations - Inventories information was deleted.
Section 16: UK disclaimer information was deleted.

Annex

1. Title	
Substance identification	bis-[4-(2,3-epoxipropoxy)phenyl]propane; EC No. 216-823-5; CAS Nbr 1675-54-3;
Exposure Scenario Name	Industrial Mixing and Application
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 05 -Mixing or blending in batch processes PROC 13 -Treatment of articles by dipping and pouring ERC 05 -Use at industrial site leading to inclusion into/onto article
Processes, tasks and activities covered	Application of product with applicator gun. Mixing operations (open systems).
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: 220 days per year; Local freshwater dilution factor: 10 ; Local marine water dilution factor: 100 ; Used amount or applied quantity per task/application by worker: 3,550 kg per day;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Provide extract ventilation to points where emissions occur; Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Refer to Section 8 of the SDS for specific glove material.; Environmental: None needed;
Waste management measures	Discharge to aquatic environment is restricted; Do not apply industrial sludge to natural soils; Prevent discharge of undissolved substance to or recover from wastewater; Sludge should be incinerated, contained or reclaimed;
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

1. Title	
Substance identification	bis-[4-(2,3-epoxipropoxy)phenyl]propane; EC No. 216-823-5; CAS Nbr 1675-54-3;
Exposure Scenario Name	Industrial Transfer
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) ERC 02 -Formulation into mixture
Processes, tasks and activities covered	Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs.
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Continuous release; Duration of exposure per day at workplace [for one worker]: 8 hours/day; Emission days per year: 225 days per year;

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	Local freshwater dilution factor: 10 ; Local marine water dilution factor: 100 ;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Refer to Section 8 of the SDS for specific glove material.; Environmental: None needed;
Waste management measures	Discharge to aquatic environment is restricted; Do not apply industrial sludge to natural soils; Sludge should be incinerated, contained or reclaimed;
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

1. Title	
Substance identification	bis-[4-(2,3-epoxipropoxy)phenyl]propane; EC No. 216-823-5; CAS Nbr 1675-54-3;
Exposure Scenario Name	Professional Use of Adhesives and Sealants
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 13 -Treatment of articles by dipping and pouring ERC 08c -Widespread use leading to inclusion into/onto article (indoor)
Processes, tasks and activities covered	Application of product with applicator gun.
2. Operational conditions and risk management measures	
Operating Conditions	Physical state: Liquid. General operating conditions: Duration of use: 8 hours/day; Emission days per year: 365 days/year;
Risk management measures	Under the operational conditions described above the following risk management measures apply: General risk management measures: Human health: Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; Environmental: None needed;
Waste management measures	Do not apply industrial sludge to natural soils; Prevent discharge of undissolved substance to or recover from wastewater;
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance

volume tracking, and potential substance registration.

3M United Kingdom MSDSs are available at www.3M.com/uk