

Safety Data Sheet

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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[™] Scotch-Weld[™] DP-110 Grey

Product Identification Numbers

FS-9100-4020-3 UU-0101-3130-6

7000080070 7100200487

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 Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.

Telephone: +353 1 280 3555 **E Mail:** tox.uk@mmm.com

Website: www.3M.com

1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

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:

18-9088-8, 18-9079-7

TRANSPORTATION INFORMATION

Refer to section 14 of the kit components for transport information.

KIT LABEL

2.1. Classification of the substance or mixture CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315 Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318 Skin Sensitization, Category 1A - Skin Sens. 1A; 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

3,6-diazaoctanethylenediamin.; Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine; bis-[4-(2,3-epoxipropoxi)phenyl]propane

HAZARD STATEMENTS:

H315 Causes skin irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P273 Avoid release to the environment.

P280B Wear protective gloves and eye/face protection.

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.

P310 Immediately call a POISON CENTRE or doctor/physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P391 Collect spillage.

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

<=125 ml Hazard statements

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

<=125 ml Precautionary statements

Prevention:

P280B Wear protective gloves and eye/face protection.

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.

P310 Immediately call a POISON CENTRE or doctor/physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or

mist.

.

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

Revision information:

Label: CLP Ingredients - kit components information was modified.

Section 1: Emergency telephone information was modified.

Section 1: Product name information was modified.

Label: CLP Classification information was modified.

Label: CLP Precautionary - Disposal information was deleted.

Label: CLP Precautionary - Prevention information was modified.

Label: CLP Precautionary - Response information was modified.

Label: CLP Supplemental Hazard Statements information was added.



Safety Data Sheet

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Document group: 18-9079-7 Version number: 8.01

23/04/2025 17/10/2024 **Revision date:** Supersedes date:

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

Scotch-Weld(tm) Epoxy Structural Adhesive DP-110 Grey (Part A)

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

Identified uses

Product

1.3. Details of the supplier of the safety data sheet

3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18. Address:

+353 1 280 3555 Telephone:

E Mail: ner-productstewardship@mmm.com

www.3M.com Website:

1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

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 2 - Skin Irrit. 2; H315 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



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	72244-98-5	701-196-7	60 - 90
Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	68082-29-1	500-191-5	10 - 30
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	216-823-5	1 - 5
3,6-diazaoctanethylenediamin	112-24-3	203-950-6	< 3

HAZARD STATEMENTS:

H315 Causes skin irritation. H318 Causes serious eye damage. H317

May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P273 Avoid release to the environment.

P280B Wear protective gloves and eye/face protection.

Response:

P305 + P351 + P338IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

Immediately call a POISON CENTRE or doctor/physician. P310 P333 + P313If skin irritation or rash occurs: Get medical advice/attention.

P391 Collect spillage.

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

<=125 ml Hazard statements

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

<=125 ml Precautionary statements

Scotch-Weld(tm) Epoxy Structural Adhesive DP-110 Grey (Part A)

Prevention:

P280B Wear protective gloves and eye/face protection.

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.

P310 Immediately call a POISON CENTRE or doctor/physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

2% of the mixture consists of components of unknown acute oral toxicity. 2% of the mixture consists of components of unknown acute dermal toxicity.

Contains 9% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines. Contains a substance that meets the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII

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]
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	(CAS-No.) 72244-98-5 (EC-No.) 701-196-7 (REACH-No.) 01- 2120118957-46	60 - 90	Aquatic Chronic 3, H412 Skin Sens. 1B, H317
Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	(CAS-No.) 68082-29-1 (EC-No.) 500-191-5 (REACH-No.) 01- 2119972320-44	10 - 30	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 2, H411
Hydrogenated terphenyl	(CAS-No.) 61788-32-7 (EC-No.) 262-967-7 (REACH-No.) 01- 2119488183-33	5 - 10	Aquatic Chronic 2, H411
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5 (REACH-No.) 01- 2119456619-26	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Polyphenyls, quater- and higher, partially hydrogenated	(CAS-No.) 68956-74-1 (EC-No.) 273-316-1	< 3	Substance not classified as hazardous
3,6-diazaoctanethylenediamin	(CAS-No.) 112-24-3 (EC-No.) 203-950-6	< 3	Acute Tox. 4, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412 Acute Tox. 4, H302 Eye Dam. 1, H318
2,4,6-tris(dimethylaminomethyl)phenol	(CAS-No.) 90-72-2	< 3	Acute Tox. 4, H302

	(EC-No.) 202-013-9 (REACH-No.) 01- 2119560597-27		Skin Corr. 1C, H314 Eye Dam. 1, H318
	(CAS-No.) 26140-60-3 (EC-No.) 247-477-3	< 1	Aquatic Acute 1, H400,M=10 Aquatic Chronic 1, H410,M=10
Carbon black	(CAS-No.) 1333-86-4 (EC-No.) 215-609-9 (REACH-No.) 01- 2119384822-32		Substance with a national occupational exposure limit

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
	` /	(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 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 for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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

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

Irritation to the skin (localized redness, swelling, itching, and dryness). 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

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

Substance	<u>Condition</u>
Aldehydes.	During combustion.
Hydrocarbons.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Ketones.	During combustion.
Oxides of nitrogen.	During combustion.
Oxides of sulphur.	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

Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. 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.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidising agents.

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
Carbon black	1333-86-4	Ireland OELs	TWA(inhalable fraction)(8	
			hours):3 mg/m3	
Terphenyl	26140-60-3	Ireland OELs	STEL(15 minutes):5	
			mg/m3(0.5 ppm)	
Hydrogenated terphenyl	61788-32-7	Ireland OELs	TWA(8 hours):19 mg/m3(2	
			ppm);TWA(8 hours):2 ppm(19	
			mg/m3);STEL(15 minutes):48	
			mg/m3(5 ppm);STEL(15	
			minutes):5 ppm(48 mg/m3)	

Ireland OELs : Ireland. OELs 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	DNEL
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane		Worker	Dermal, Short-term exposure, Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	12.3 mg/m³
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane		Worker	Inhalation, Short-term exposure, Systemic effects	12.3 mg/m³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation	Compartment	PNEC
	Product		
bis-[4-(2,3-		Freshwater	0.003 mg/l
epoxipropoxi)phenyl]propa			
ne			
bis-[4-(2,3-		Freshwater sediments	0.5 mg/kg d.w.
epoxipropoxi)phenyl]propa			

ne		
bis-[4-(2,3- epoxipropoxi)phenyl]propa	Intermittent releases to water	0.013 mg/l
ne		
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne	Marine water	0.0003 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne	Marine water sediments	0.5 mg/kg d.w.
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne	Sewage Treatment Plant	10 mg/l

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

8.2. Exposure controls

In addition, refer to the annex for more information.

8.2.1. Engineering controls

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:

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:

MaterialThickness (mm)Breakthrough TimePolymer laminateNo data availableNo 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

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	Liquid.		
Specific Physical Form:	Paste		
Colour	Black		
Odor	Mercaptan		
Odour threshold	No data available.		
Melting point/freezing point	No data available.		
Boiling point/boiling range	No data available.		
Flammability	Not applicable.		
Flammable Limits(LEL)	No data available.		
Flammable Limits(UEL)	No data available.		
Flash point	No data available.		
Autoignition temperature	No data available.		
Decomposition temperature	No data available.		
pH	substance/mixture is non-soluble (in water)		
Kinematic Viscosity	36,364 mm ² /sec		
Water solubility	No data available.		
Solubility- non-water	No data available.		
Partition coefficient: n-octanol/water	No data available.		
Vapour pressure	No data available.		
Density	1.1 g/ml		
Relative density	1.08 - 1.11 [Ref Std:WATER=1]		
Relative Vapour Density	No data available.		
Particle Characteristics	Not applicable.		

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic CompoundsNo data available.Evaporation rateNo data available.Percent volatile0 % weight

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.

10.5 Incompatible materials

Strong acids.

Strong oxidising agents.

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

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

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

May be harmful if swallowed.

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

Additional information:

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

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 >2,000 - =5,000 mg/kg
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Dermal	Rabbit	LD50 > 10,200 mg/kg
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Ingestion	Rat	LD50 2,600 mg/kg
Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Dermal	Rat	LD50 > 2,000 mg/kg
Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Ingestion	Rat	LD50 > 5,000 mg/kg
Hydrogenated terphenyl	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrogenated terphenyl	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 4.7 mg/l
Hydrogenated terphenyl	Ingestion	Rat	LD50 > 10,000 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Rat	LD50 > 1,000 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
3,6-diazaoctanethylenediamin	Dermal	Rat	LD50 1,465 mg/kg
3,6-diazaoctanethylenediamin	Ingestion	Rat	LD50 1,591 mg/kg
Terphenyl	Dermal	Rabbit	LD50 > 5,000 mg/kg
Terphenyl	Inhalation- Dust/Mist (4 hours)	Rat	LD50 > 3.8 mg/l
Terphenyl	Ingestion	Rat	LD50 2,304 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name		Value
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Rabbit	No significant irritation
Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	In vitro data	Irritant
Hydrogenated terphenyl	Rabbit	No significant irritation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Mild irritant
2,4,6-tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
3,6-diazaoctanethylenediamin	Rabbit	Corrosive
Terphenyl	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Rabbit	Mild irritant
Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Rabbit	Corrosive
Hydrogenated terphenyl	Rabbit	No significant irritation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Moderate irritant
2,4,6-tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
3,6-diazaoctanethylenediamin	Rabbit	Corrosive

Terphenyl	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Mouse	Sensitising
Fatty acids, C18-unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Mouse	Sensitising
Hydrogenated terphenyl	Human	Not classified
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Human and	Sensitising
2,4,6-tris(dimethylaminomethyl)phenol	Guinea pig	Not classified
3,6-diazaoctanethylenediamin	Guinea pig	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	In Vitro	Not mutagenic
Hydrogenated terphenyl	In Vitro	Not mutagenic
Hydrogenated terphenyl	In vivo	Not mutagenic
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In vivo	Not mutagenic
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
2,4,6-tris(dimethylaminomethyl)phenol	In Vitro	Not mutagenic
3,6-diazaoctanethylenediamin	In vivo	Not mutagenic
3,6-diazaoctanethylenediamin	In Vitro	Some positive data exist, but the data are not
•		sufficient for classification
Terphenyl	In Vitro	Not mutagenic
Terphenyl	In vivo	Not mutagenic
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not
		sufficient for classification

Carcinogenicity

Name	Route	Species	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
3,6-diazaoctanethylenediamin	Dermal	Mouse	Not carcinogenic
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Kepi oductive and/of Develo	teproductive and/or Developmental Effects								
Name	Route	Value	Species	Test result	Exposure				
					Duration				
Hydrogenated terphenyl	Ingestion	Not classified for female reproduction	Rat	NOAEL 81	2 generation				
		_		mg/kg/day					
Hydrogenated terphenyl	Ingestion	Not classified for male reproduction	Rat	NOAEL 62	2 generation				
		•		mg/kg/day					

Hydrogenated terphenyl	Ingestion	Not classified for development	Rat	NOAEL 500	during
				mg/kg/day	organogenesis
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for female reproduction	Rat	NOAEL 750	2 generation
				mg/kg/day	
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750	2 generation
				mg/kg/day	
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Not classified for development	Rabbit	NOAEL 300	during
		_		mg/kg/day	organogenesis
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for development	Rat	NOAEL 750	2 generation
				mg/kg/day	_
2,4,6-tris(dimethylaminomethyl)phenol	Ingestion	Not classified for male reproduction	Rat	NOAEL 150	2 generation
		_		mg/kg/day	
2,4,6-tris(dimethylaminomethyl)phenol	Ingestion	Not classified for female reproduction	Rat	NOAEL 50	2 generation
		_		mg/kg/day	_
2,4,6-tris(dimethylaminomethyl)phenol	Ingestion	Not classified for development	Rabbit	NOAEL 15	during
				mg/kg/day	gestation
3,6-diazaoctanethylenediamin	Dermal	Not classified for development	Rabbit	NOAEL 125	during
				mg/kg/day	organogenesis
3,6-diazaoctanethylenediamin	Ingestion	Not classified for development	Rat	NOAEL 750	during
		_		mg/kg/day	organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2,4,6- tris(dimethylaminomethyl) phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
3,6- diazaoctanethylenediamin	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
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 75 mg/kg/day	90 days
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-epoxypropane with hydrogen sulphide	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	90 days
Reaction products of pentaerythritol, propoxylated and 1-chloro- 2,3-epoxypropane with hydrogen sulphide	Ingestion	endocrine system heart skin immune system nervous system eyes kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
Hydrogenated terphenyl	Dermal	skin	Not classified	Rabbit	NOAEL 500 mg/kg/day	3 weeks
Hydrogenated terphenyl	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 2,000 mg/kg/day	3 weeks
Hydrogenated terphenyl	Inhalation	liver hematopoietic system eyes	Not classified	Rat	NOAEL 0.5 mg/l	13 weeks
Hydrogenated terphenyl	Ingestion	hematopoietic system kidney and/or bladder liver eyes respiratory system	Not classified	Rat	NOAEL 120 mg/kg/day	14 weeks

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bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	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
2,4,6- tris(dimethylaminomethyl) phenol	Dermal	skin	Not classified	Rat	NOAEL 25 mg/kg/day	4 weeks
2,4,6- tris(dimethylaminomethyl) phenol	Dermal	liver nervous system auditory system hematopoietic system eyes	Not classified	Rat	NOAEL 125 mg/kg/day	4 weeks
2,4,6- tris(dimethylaminomethyl) phenol	Ingestion	heart endocrine system hematopoietic system liver muscles nervous system kidney and/or bladder respiratory system vascular system auditory system skin gastrointestinal tract bone, teeth, nails, and/or hair immune system eyes	Not classified	Rat	NOAEL 150 mg/kg/day	90 days
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure

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

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Reaction products of pentaerythritol, propoxylated and 1- chloro-2,3- epoxypropane with	72244-98-5	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
hydrogen sulphide						
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-	72244-98-5	Green algae	Experimental	72 hours	EC50	>733 mg/l
epoxypropane with hydrogen sulphide						
Reaction products of pentaerythritol,	72244-98-5	Water flea	Experimental	48 hours	EC50	12 mg/l
propoxylated and 1- chloro-2,3- epoxypropane with						
hydrogen sulphide	72244 00 5	7.1 P. 1	P : 1	061	1.050	07 //
Reaction products of pentaerythritol, propoxylated and 1-chloro-2,3-	72244-98-5	Zebra Fish	Experimental	96 hours	LC50	87 mg/l
epoxypropane with						
hydrogen sulphide Reaction products of	72244-98-5	Green algae	Experimental	72 hours	NOEC	338 mg/l
pentaerythritol, propoxylated and 1- chloro-2,3-	72244-98-3	Green aigae	Experimental	72 nours	NOEC	338 mg/1
epoxypropane with hydrogen sulphide						
Reaction products of pentaerythritol,	72244-98-5	Water flea	Experimental	21 days	NOEC	3.5 mg/l
propoxylated and 1- chloro-2,3- epoxypropane with						
hydrogen sulphide						
Fatty acids, C18- unsaturated, dimers, oligomeric reaction	68082-29-1	Activated sludge	Experimental	3 hours	EC10	130 mg/l
products with tall-oil fatty acids and						
Fatty acids, C18-	68082-29-1	Green algae	Experimental	72 hours	EC50	4.34 mg/l
unsaturated, dimers, oligomeric reaction	00002 23 1	Green argue	Ехрегинения	72 Hours	Leso	4.54 Mg/I
products with tall-oil fatty acids and						
Fatty acids, C18-	68082-29-1	Water flea	Experimental	48 hours	EC50	7.07 mg/l
unsaturated, dimers, oligomeric reaction products with tall-oil						
fatty acids and triethylenetetramine						
Fatty acids, C18- unsaturated, dimers, oligomeric reaction	68082-29-1	Zebra Fish	Experimental	96 hours	LC50	7.07 mg/l
products with tall-oil fatty acids and triethylenetetramine						
Fatty acids, C18-	68082-29-1	Green algae	Experimental	72 hours	NOEC	0.5 mg/l
unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and						-
triethylenetetramine						
Hydrogenated terphenyl	61788-32-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

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Hydrogenated terphenyl	61788-32-7	Activated sludge	Experimental	3 hours	NOEC	103 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Activated sludge	Analogous Compound	3 hours	IC50	>100 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Green algae	Experimental	72 hours	ErC50	>11 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
3,6- diazaoctanethylenediam in	112-24-3	Green algae	Experimental	72 hours	EC50	27.4 mg/l
3,6- diazaoctanethylenediam in	112-24-3	Guppy	Experimental	96 hours	LC50	570 mg/l
3,6- diazaoctanethylenediam in	112-24-3	Water flea	Experimental	48 hours	EC50	37.4 mg/l
3,6- diazaoctanethylenediam	112-24-3	Green algae	Experimental	72 hours	NOEC	0.468 mg/l
3,6- diazaoctanethylenediam	112-24-3	Water flea	Experimental	21 days	NOEC	2.86 mg/l
in 2,4,6- tris(dimethylaminometh yl)phenol	90-72-2	N/A	Experimental	96 hours	LC50	718 mg/l
	90-72-2	Common Carp	Experimental	96 hours	LC50	>100 mg/l
2,4,6- tris(dimethylaminometh yl)phenol	90-72-2	Green algae	Experimental	72 hours	EC50	46.7 mg/l
2,4,6- tris(dimethylaminometh yl)phenol	90-72-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
2,4,6- tris(dimethylaminometh yl)phenol	90-72-2	Green algae	Experimental	72 hours	NOEC	6.44 mg/l
Terphenyl	26140-60-3	Water flea	Analogous Compound	48 hours	EC50	0.022 mg/l
Terphenyl	26140-60-3	Green algae	Experimental	72 hours	ErC50	0.102 mg/l
Terphenyl	26140-60-3	Rainbow trout	Experimental	96 hours	LC50	27 mg/l
Terphenyl	26140-60-3	Fathead minnow	Experimental	34 days	NOEC	0.064 mg/l
Terphenyl	26140-60-3	Green algae	Experimental	72 hours	NOEC	0.00322 mg/l
Terphenyl	26140-60-3	Water flea	Experimental	21 days	NOEC	0.005 mg/l
Carbon black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l

Carbon black	1333-86-4	Zebra Fish	Experimental			>100 mg/l
					of water sol	
Carbon black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt	100 mg/l
					of water sol	
Carbon black	1333-86-4	Activated sludge	Experimental	3 hours	NOEC	>800 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Reaction products of pentaerythritol, propoxylated and 1-chloro- 2,3-epoxypropane with hydrogen sulphide	72244-98-5	Experimental Biodegradation	28 days	CO2 evolution	5 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
Fatty acids, C18- unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	68082-29-1	Analogous Compound Biodegradation	28 days	CO2 evolution	≤8 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
Hydrogenated terphenyl	61788-32-7	Experimental Biodegradation	35 days	CO2 evolution	1 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
Hydrogenated terphenyl	61788-32-7	Experimental Photolysis		Photolytic half- life(in water)	86 days (t 1/2)	
Hydrogenated terphenyl	61788-32-7	Experimental Soil Metabolism Aerobic		Half-life (t 1/2)	202 days (t 1/2)	
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	117 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	Data not availbl- insufficient	N/A	N/A	N/A	N/A
3,6- diazaoctanethylenediamin	112-24-3	Experimental Biodegradation	20 days	BOD	0 %BOD/ThO D	OECD 301D - Closed bottle test
2,4,6- tris(dimethylaminomethyl)p henol	90-72-2	Experimental Biodegradation	28 days	BOD	4 %BOD/ThO D	OECD 301D - Closed bottle test
Terphenyl	26140-60-3	Experimental Biodegradation	14 days	BOD	0.5 %BOD/Th OD	OECD 301C - MITI test (I)
Carbon black	1333-86-4	Data not availbl- insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Reaction products of pentaerythritol, propoxylated and 1-chloro- 2,3-epoxypropane with hydrogen sulphide	72244-98-5	Estimated Bioconcentration		Log Kow	>1.2	
Fatty acids, C18- unsaturated, dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	68082-29-1	Experimental Bioconcentration		Log Kow	≤3.55	OECD 117 log Kow HPLC method
Hydrogenated terphenyl	61788-32-7	Analogous Compound BCF - Fish	42 days	Bioaccumulation factor	5200	similar to OECD 305
Hydrogenated terphenyl	61788-32-7	Experimental Bioconcentration		Log Kow	>5.3	OECD 117 log Kow HPLC method

bis-[4-(2,3- epoxipropoxi)phenyl]propa ne	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	OECD 117 log Kow HPLC method
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
3,6-diazaoctanethylenediamin	112-24-3	Experimental BCF - Fish	42 days	Bioaccumulation factor	<5.0	OECD305-Bioconcentration
2,4,6- tris(dimethylaminomethyl) phenol	90-72-2	Experimental Bioconcentration		Log Kow	-0.66	830.7550 Part.Coef Shake Flask
Terphenyl	26140-60-3	Analogous Compound BCF - Fish	56 days	Bioaccumulation factor	12993	OECD305-Bioconcentration
Terphenyl	26140-60-3	Estimated Bioconcentration		Log Kow	5.86	
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Hydrogenated terphenyl	61788-32-7	Experimental Mobility in Soil	Koc	≥8400 l/kg	OECD 121 Estim. of Koc by HPLC
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne	1675-54-3	Modeled Mobility in Soil	Koc	450 l/kg	Episuite TM
Terphenyl	26140-60-3	Estimated Mobility in Soil	Koc	≥1.8E+04 l/kg	

12.5. Results of the PBT and vPvB assessment

Ingredient	CAS Nbr	PBT/vPvB status
Hydrogenated terphenyl	61788-32-7	Meets REACH vPvB criteria

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 uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. 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.

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

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	UN3082	UN3082	UN3082
14.2 UN proper shipping name		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(TERPHENYL)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(TERPHENYL)
14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	M6	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

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>	CAS Nbr	<u>Classification</u>	Regulation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Gr. 3: Not classifiable	International Agency
			for Research on Cancer
Carbon black	1333-86-4	Grp. 2B: Possible human	International Agency
		carc.	for Research on Cancer

Restrictions on the manufacture, placing on the market and use:

The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

bis-[4-(2,3-epoxipropoxi)phenyl]propane 1675-54-3

Authorization status under REACH:

The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

IngredientCAS NbrIngredientCAS NbrHydrogenated terphenyl61788-32-7Terphenyl26140-60-3

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

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA.

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of		
	Lower-tier requirements	Upper-tier requirements	
E2 Hazardous to the Aquatic	200	500	
environment			

Seveso named dangerous substances, Annex 1, Part 2 None

Regulation (EU) No 649/2012

No chemicals listed

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.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.

Scotch-Weld(tm) Epoxy Structural Adhesive DP-110 Grey (Part A)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:

- Section 1: E-mail address information was modified.
- CLP: Ingredient table information was modified.
- Section 3: Composition/ Information of ingredients table information was modified.
- Section 6: Accidental release personal information information was modified.
- Section 7: Conditions safe storage information was modified.
- Section 12: Component ecotoxicity information information was modified.
- Section 12: Persistence and Degradability information information was modified.
- Section 12:Bioccumulative potential information information was modified.
- Section 15: Authorization status under REACH: SVHC Authorization ingredient information information was modified.

Annex

1. Title		
Substance identification	bis-[4-(2,3-epoxipropoxi)phenyl]propane; EC No. 216-823-5; CAS Nbr 1675-54-3;	
Exposure Scenario Name	Formulation	
Lifecycle Stage	Formulation or re-packing	
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	Batch manufacture of a chemical substance or formulation (including polymerisation reactions).	
2. Operational conditions and risk mana	8	
Operating Conditions	Physical state:Liquid. General operating conditions: Duration of use: 8 hours/day; Emission days per year: <= 225 days per 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: Waste Water treatment - Incineration;	
Waste management measures	Do not apply industrial sludge to natural soils; Prevent leaks and prevent soil / water pollution caused by leaks;	
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-epoxipropoxi)phenyl]propane;		
	EC No. 216-823-5;		
	CAS Nbr 1675-54-3;		
Exposure Scenario Name	Industrial Use of Adhesives		
Lifecycle Stage	Use at industrial sites		
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-		
	dedicated facilities		
	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 a roller or brush. Application of product with		
110ccsses, tasks and activities covered	application of product with a roller of ordish. Application of product with a product with a wipe. Transfers without dedicated controls,		
	including loading, filling, dumping, bagging.		
2. Operational conditions and risk man			
Operating Conditions	Physical state:Liquid.		
	General operating conditions:		
	Duration of use: 8 hours/day;		
	Emission days per year: 220 days/year;		
	Frequency of exposure at workplace [for one worker]: 5 days/week;		
D. I.			
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.		
1. Title	Tanana and an		
Substance identification	bis-[4-(2,3-epoxipropoxi)phenyl]propane;		
	EC No. 216-823-5; CAS Nbr 1675-54-3;		
	CAS NOI 10/3-34-3,		
E	Desferois and the of Adhesises		
Exposure Scenario Name Lifecycle Stage	Professional Use of Adhesives Widespread use by professional workers		
Contributing activities	Widespread use by professional workers PROC 13 -Treatment of articles by dipping and pouring		
Conditioning activities	ERC 08c -Widespread use leading to inclusion into/onto article (indoor)		
	ERC 08f -Widespread use leading to inclusion into/onto article (outdoor)		
Processes, tasks and activities covered	Application of product with applicator gun.		
2. Operational conditions and risk man			
Operating Conditions	Physical state:Liquid.		
	General operating conditions:		
	Application Temperature:: <= 40 degree Celsius;		
	Duration of use: 8 hours/day;		
	Indoors with good general ventilation;		
	Under the operational conditions described above the following risk management		
	I Under the operational conditions described above the following risk management		
Risk management measures			
Risk management measures	measures apply: General risk management measures:		

	Human health: Goggles - Chemical resistant; Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; Environmental: Industrial Sewage Treatment Plant;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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 Ireland MSDSs are available at www.3M.com



Safety Data Sheet

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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

Scotch-Weld(tm) Epoxy Structural Adhesive DP-110 Grey (Part B)

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

Identified uses

Adhesive

1.3. Details of the supplier of the safety data sheet

Address: 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.

Telephone: +353 1 280 3555 E Mail: tox.uk@mmm.com Website: www.3M.com

1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

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.

The carcinogenicity classification for titanium dioxide is not applicable based on physical form (material is not a powder).

CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315 Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319 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-epoxipropoxi)phenyl]propane 1675-54-3 216-823-5 60 - 90

HAZARD STATEMENTS:

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.

PRECAUTIONARY STATEMENTS

Prevention:

P273 Avoid release to the environment.

P280E Wear protective gloves.

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.

P391 Collect spillage.

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.

<=125 ml Precautionary statements

Prevention:

P280E Wear protective gloves.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH211

Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

1% of the mixture consists of components of unknown acute oral toxicity.

Contains 8% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

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

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]
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3	60 - 90	Skin Irrit. 2, H315
	(EC-No.) 216-823-5		Eye Irrit. 2, H319
	(REACH-No.) 01-		Skin Sens. 1, H317
	2119456619-26		Aquatic Chronic 2, H411
Acrylic copolymer	Trade Secret	10 - 30	Substance not classified as hazardous
Hydrogenated terphenyl	(CAS-No.) 61788-32-7 (EC-No.) 262-967-7	5 - 10	Aquatic Chronic 2, H411
	(LC-110.) 202-707-7		
Titanium dioxide	(CAS-No.) 13463-67-7	1 - 3	Carc. 2, H351 (inhalation)
	(EC-No.) 236-675-5		
	(REACH-No.) 01-		
	2119489379-17		
Polyphenyls, quater- and higher, partially	(CAS-No.) 68956-74-1	< 1.5	Substance not classified as hazardous
hydrogenated	(EC-No.) 273-316-1		
Terphenyl	(CAS-No.) 26140-60-3	< 1	Aquatic Acute 1, H400,M=10
	(EC-No.) 247-477-3		Aquatic Chronic 1, H410,M=10

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

Eye contact

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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

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

Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision).

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

SubstanceConditionAldehydes.During combustion.Carbon monoxideDuring combustion.Carbon dioxide.During combustion.Irritant vapours or gases.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

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

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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from oxidising agents.

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
Titanium dioxide	13463-67-7	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3	
Terphenyl	26140-60-3	Ireland OELs	STEL(15 minutes):5 mg/m3(0.5 ppm)	
Hydrogenated terphenyl	61788-32-7	Ireland OELs	TWA(8 hours):19 mg/m3(2 ppm);TWA(8 hours):2 ppm(19 mg/m3);STEL(15 minutes):48 mg/m3(5 ppm);STEL(15 minutes):5 ppm(48 mg/m3)	

Ireland OELs: Ireland. OELs 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	Population	Human exposure	DNEL
	Product		pattern	
bis-[4-(2,3-		Worker	Dermal, Long-term	8.3 mg/kg bw/d
epoxipropoxi)phenyl]prop			exposure (8 hours),	

ane		Systemic effects	
bis-[4-(2,3-	Worker	Dermal, Short-term	8.3 mg/kg bw/d
epoxipropoxi)phenyl]prop ane		exposure, Systemic effects	
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	12.3 mg/m³
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	Worker	Inhalation, Short-term exposure, Systemic effects	12.3 mg/m³

Predicted no effect concentrations (PNEC)

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

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

8.2. Exposure controls

In addition, refer to the annex for more information.

8.2.1. Engineering controls

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:

Safety glasses with side shields.

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:

MaterialThickness (mm)Breakthrough TimePolymer laminateNo data availableNo 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

None required.

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	Liquid.	
Specific Physical Form:	Paste	
Colour	White	
Odor	Very Slight Odor	
Odour threshold	No data available.	
Melting point/freezing point	Not applicable.	
Boiling point/boiling range	>=200 °C [Details:Epoxy resin]	
Flammability	Not applicable.	
Flammable Limits(LEL)	Not applicable.	
Flammable Limits(UEL)	Not applicable.	
Flash point	>=150 °C [Details:Epoxy resin]	
Autoignition temperature	Not applicable.	
Decomposition temperature	No data available.	
pH	substance/mixture is non-soluble (in water)	
Kinematic Viscosity	18,018 mm ² /sec	
Water solubility	No data available.	
Solubility- non-water	No data available.	
Partition coefficient: n-octanol/water	No data available.	
Density	1.11 g/cm3	
Relative density	1.09 - 1.13 [<i>Ref Std:</i> WATER=1]	
Relative Vapour Density	No data available.	
Particle Characteristics	Not applicable.	

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds Evaporation rate Percent volatile No data available. Not applicable. 0 % weight

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.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

Substance

None known.

Condition

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

No health effects are expected.

Skin contact

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

Eye contact

Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy 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	Ingestion		No data available; calculated ATE >5,000 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
Acrylic copolymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Acrylic copolymer	Ingestion	Rat	LD50 > 5,000 mg/kg
Hydrogenated terphenyl	Dermal	Rabbit	LD50 > 2,000 mg/kg
Hydrogenated terphenyl	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 4.7 mg/l
Hydrogenated terphenyl	Ingestion	Rat	LD50 > 10,000 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Terphenyl	Dermal	Rabbit	LD50 > 5,000 mg/kg
Terphenyl	Inhalation- Dust/Mist (4 hours)	Rat	LD50 > 3.8 mg/l
Terphenyl	Ingestion	Rat	LD50 2,304 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
	1	
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Mild irritant
Acrylic copolymer	Professio	Minimal irritation
	nal	
	judgemen	
	t	
Hydrogenated terphenyl	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
Terphenyl	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Moderate irritant
Acrylic copolymer	Professio	Mild irritant
	nal	
	judgemen	
	t	
Hydrogenated terphenyl	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
Terphenyl	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Human and	Sensitising

Scotch-Weld(tm) Epoxy Structural Adhesive DP-110 Grey (Part B)

	animal	
Hydrogenated terphenyl	Human	Not classified
Titanium dioxide	Human	Not classified
	and	
	animal	

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In vivo	Not mutagenic
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Hydrogenated terphenyl	In Vitro	Not mutagenic
Hydrogenated terphenyl	In vivo	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Terphenyl	In Vitro	Not mutagenic
Terphenyl	In vivo	Not mutagenic

Carcinogenicity

our omogenier,			
Name	Route	Species	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Hydrogenated terphenyl	Ingestion	Not classified for female reproduction	Rat	NOAEL 81 mg/kg/day	2 generation
Hydrogenated terphenyl	Ingestion	Not classified for male reproduction	Rat	NOAEL 62 mg/kg/day	2 generation
Hydrogenated terphenyl	Ingestion	Not classified for development	Rat	NOAEL 500 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Specific Target Organ Toxicity - repeated exposure

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

bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	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
Hydrogenated terphenyl	Dermal	skin	Not classified	Rabbit	NOAEL 500 mg/kg/day	3 weeks
Hydrogenated terphenyl	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 2,000 mg/kg/day	3 weeks
Hydrogenated terphenyl	Inhalation	liver hematopoietic system eyes	Not classified	Rat	NOAEL 0.5 mg/l	13 weeks
Hydrogenated terphenyl	Ingestion	hematopoietic system kidney and/or bladder liver eyes respiratory system	Not classified	Rat	NOAEL 120 mg/kg/day	14 weeks
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure

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	Туре	Exposure	Test endpoint	Test result
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Activated sludge	Analogous Compound	3 hours	IC50	>100 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l

bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Green algae	Experimental	72 hours	ErC50	>11 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
Acrylic copolymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Hydrogenated terphenyl	61788-32-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Hydrogenated terphenyl	61788-32-7	Activated sludge	Experimental	3 hours	NOEC	103 mg/l
Titanium dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Terphenyl	26140-60-3	Water flea	Analogous Compound	48 hours	EC50	0.022 mg/l
Terphenyl	26140-60-3	Green algae	Experimental	72 hours	ErC50	0.102 mg/l
Terphenyl	26140-60-3	Rainbow trout	Experimental	96 hours	LC50	27 mg/l
Terphenyl	26140-60-3	Fathead minnow	Experimental	34 days	NOEC	0.064 mg/l
Terphenyl	26140-60-3	Green algae	Experimental	72 hours	NOEC	0.00322 mg/l
Terphenyl	26140-60-3	Water flea	Experimental	21 days	NOEC	0.005 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	117 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Acrylic copolymer	Trade Secret	Data not availbl- insufficient	N/A	N/A	N/A	N/A
Hydrogenated terphenyl	61788-32-7	Experimental Biodegradation	35 days	CO2 evolution	1 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
Hydrogenated terphenyl	61788-32-7	Experimental Photolysis		Photolytic half- life(in water)	86 days (t 1/2)	
Hydrogenated terphenyl	61788-32-7	Experimental Soil Metabolism Aerobic		Half-life (t 1/2)	202 days (t 1/2)	
Titanium dioxide	13463-67-7	Data not availbl- insufficient	N/A	N/A	N/A	N/A
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	Data not availbl- insufficient	N/A	N/A	N/A	N/A

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Scotch-Weld(tm) Epoxy Structural Adhesive DP-110 Grey (Part B)

Terphenyl	26140-60-3	Experimental	14 days	BOD	0.5 %BOD/Th	OECD 301C - MITI test (I)
		Biodegradation	-		OD	

12.3: Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	OECD 117 log Kow HPLC method
Acrylic copolymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrogenated terphenyl	61788-32-7	Analogous Compound BCF - Fish	42 days	Bioaccumulation factor	5200	similar to OECD 305
Hydrogenated terphenyl	61788-32-7	Experimental Bioconcentration		Log Kow	>5.3	OECD 117 log Kow HPLC method
Titanium dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	9.6	
Polyphenyls, quater- and higher, partially hydrogenated	68956-74-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Terphenyl	26140-60-3	Analogous Compound BCF - Fish	56 days	Bioaccumulation factor	12993	OECD305-Bioconcentration
Terphenyl	26140-60-3	Estimated Bioconcentration		Log Kow	5.86	

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
bis-[4-(2,3-	1675-54-3	Modeled Mobility	Koc	450 l/kg	Episuite TM
epoxipropoxi)phenyl]propa		in Soil			
ne					
Hydrogenated terphenyl	61788-32-7	Experimental	Koc	≥8400 l/kg	OECD 121 Estim. of Koc by
		Mobility in Soil			HPLC
Terphenyl	26140-60-3	Estimated	Koc	≥1.8E+04 l/kg	
		Mobility in Soil			

12.5. Results of the PBT and vPvB assessment

Ingredient	CAS Nbr	PBT/vPvB status
Hydrogenated terphenyl	61788-32-7	Meets REACH PBT criteria

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 completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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.

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

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	UN3082	UN3082	UN3082
14.2 UN proper shipping name		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(TERPHENYL)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(TERPHENYL)
14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	Marine Pollutant
14.6 Special precautions for user		Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	M6	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

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>	CAS Nbr	Classification	Regulation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Gr. 3: Not classifiable	International Agency
			for Research on Cancer
Titanium dioxide	13463-67-7	Grp. 2B: Possible human	International Agency
		carc.	for Research on Cancer

Restrictions on the manufacture, placing on the market and use:

The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

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

1675-54-3

Authorization status under REACH:

The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

IngredientCAS NbrHydrogenated terphenyl61788-32-7

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

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

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Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of		
	Lower-tier requirements	Upper-tier requirements	
E2 Hazardous to the Aquatic	200	500	
environment			

Seveso named dangerous substances, Annex 1, Part 2 None

Regulation (EU) No 649/2012

No chemicals listed

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.
H319	Causes serious eye irritation.
H351i	Suspected of causing cancer by inhalation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Revision information:

CLP: Ingredient table information was modified.

- Section 3: Composition/Information of ingredients table information was modified.
- Section 8: Eye/face protection information information was modified.
- Section 8: Personal Protection Respiratory Information information was deleted.
- Section 8: Respiratory protection recommended respirators guide information was deleted.
- Section 8: Respiratory protection recommended respirators information information was deleted.
- Section 8: Respiratory protection information information was added.
- Section 9: Flammability (solid, gas) information information was deleted.
- Section 09: Flammability information information was added.
- Section 09: Particle Characteristics N/A information was added.
- Section 12: Component ecotoxicity information information was modified.
- Section 12: Mobility in soil information information was modified.
- Section 12: Persistence and Degradability information information was modified.
- Section 12:Bioccumulative potential information information was modified.
- Section 15: Seveso Hazard Category Text information was added.

Annex

1. Title				
Substance identification	bis-[4-(2,3-epoxipropoxi)phenyl]propane;			
	EC No. 216-823-5;			
	CAS Nbr 1675-54-3;			
Exposure Scenario Name	Formulation			
Lifecycle Stage	Formulation or re-packing			
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	Batch manufacture of a chemical substance or formulation (including			
	polymerisation reactions).			
2. Operational conditions and risk mana	gement measures			
Operating Conditions Physical state:Liquid.				
	General operating conditions:			
	Duration of use: 8 hours/day;			
	Emission days per year: <= 225 days per 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			

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	specific glove material.; Environmental: Waste Water treatment - Incineration;
Waste management measures	Do not apply industrial sludge to natural soils; Prevent leaks and prevent soil / water pollution caused by leaks;
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-epoxipropoxi)phenyl]propane; EC No. 216-823-5; CAS Nbr 1675-54-3;			
Exposure Scenario Name	Industrial Use of Adhesives			
Lifecycle Stage	Use at industrial sites			
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non- dedicated facilities 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 a roller or brush. Application of product with applicator gun. Application with a wipe. Transfers without dedicated controls, including loading, filling, dumping, bagging.			
2. Operational conditions and risk mana	agement measures			
Operating Conditions	Physical state:Liquid. General operating conditions: Duration of use: 8 hours/day; Emission days per year: 220 days/year; Frequency of exposure at workplace [for one worker]: 5 days/week;			
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.

Scotch-Weld(tm) Epoxy Structural Adhesive DP-110 Grey (Part B)	
M Instand MCDCs are socilable of course 2M soci	
M Ireland MSDSs are available at www.3M.com	