Safety Data Sheet

Document group:	11-2355-3	**Version number:**	14.03
Revision date:	08/09/2021	**Supersedes date:**	12/07/2019

Transportation version number: 2.00 (05/08/2019)

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™ Epoxy Potting Compound/Adhesive DP270 Clear

Product Identification Numbers

FS-9100-4251-4 UU-0101-3326-0

7000033799 7100200493

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:

11-2357-9, 11-2356-1

TRANSPORTATION INFORMATION

FS-9100-4251-4

ADR/RID: UN2810, TOXIC LIQUID, ORGANIC, N.O.S. LIMITED QUANTITY, (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE)), (4-NONYL PHENOL,BRANCHED), 6.1, III, (E), ADR Classification Code: T1.
IMDG-CODE: UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE)), (4-NONYL PHENOL,BRANCHED), 6.1, III, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FA,SA.
ICAO/IATA: UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE)), (4-NONYL PHENOL,BRANCHED), 6.1, III.

UU-0101-3326-0

Component 1
ADR/RID: UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION 375, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXEMPTION, (LIQUID EPOXY RESIN), III, --.
IMDG-CODE: UN3082, NOT RESTRICTED AS PER IMDG CODE 2.10.2.7, MARINE POLLUTANT EXCEPTION, (LIQUID EPOXY RESIN), III, IMDG-Code segregation code: NONE, EMS: --.
ICAO/IATA: UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION A197, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXCEPTION, (LIQUID EPOXY RESIN), III.

Component 2
ADR/RID: UN2810, TOXIC LIQUID, ORGANIC, N.O.S. LIMITED QUANTITY, (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE)), (4-NONYL PHENOL,BRANCHED), 6.1, III, (E), ADR Classification Code: T1.
IMDG-CODE: UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE)), (4-NONYL PHENOL,BRANCHED), 6.1, III, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FA,SA.
ICAO/IATA: UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (4,4-METHYLENEBIS(2-METHYLCYCLOHEXYLAMINE)), (4-NONYL PHENOL,BRANCHED), 6.1, III.

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:
Acute Toxicity, Category 4 - Acute Tox. 4; H302
Acute Toxicity, Category 3 - Acute Tox. 3; H311
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
Reproductive Toxicity, Category 1B - Repr. 1B; H360
Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400
Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER.

Symbols

GHS06 (Skull and crossbones) |GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Contains:
benzyl alcohol; bis-[4-(2,3-epoxipropoxi)phenyl]propane; 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine); 4-nonylphenol, branched; Benzene, ethenyl-, homopolymer (oligomeric)

HAZARD STATEMENTS:

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H360Fd2	May damage fertility. Suspected of damaging the unborn child
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P280C	Wear protective gloves and protective clothing.

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.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

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

<=125 ml Hazard statements

H311	Toxic in contact with skin.
H317	May cause an allergic skin reaction.
H360Fd2	May damage fertility. Suspected of damaging the unborn child

<=125 ml Precautionary statements

Prevention:

P201	Obtain special instructions before use.
P280C	Wear protective gloves and protective clothing.

Response:

P308 + P313	IF exposed or concerned: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

SUPPLEMENTAL INFORMATION:

Supplemental Precautionary Statements:

Restricted to professional users.

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 2: <125ml Hazard - Health information was modified.
Section 2: <125ml Precautionary - Response 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 Precautionary Statements information was deleted.
Section 02: SDS Elements: CLP Supplemental Precautionary Statements information was added.
Section 15: Label remarks and EU Detergent information was deleted.

Safety Data Sheet

Document group:	11-2356-1	**Version number:**	16.00
Revision date:	30/03/2023	**Supersedes date:**	09/07/2021

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
3M™ Scotch-Weld™ Epoxy Potting Compound/Adhesive DP270 Clear, Part B

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

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 2 - Eye Irrit. 2; H319
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Reproductive Toxicity, Category 1B - Repr. 1B; H360F
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
GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	216-823-5	90 - 98
Hydrocarbon resin	9003-53-6	500-008-9	1 - 10

HAZARD STATEMENTS:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H360F	May damage fertility.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
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.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

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

<=125 ml Hazard statements

H317	May cause an allergic skin reaction.
H360F	May damage fertility.

<=125 ml Precautionary statements

Prevention:

P201	Obtain special instructions before use.
P280E	Wear protective gloves.

Response:

P308 + P313	IF exposed or concerned: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

SUPPLEMENTAL INFORMATION:

Supplemental Precautionary Statements:
Restricted to professional users.

10% of the mixture consists of components of unknown acute oral toxicity.

Contains 10% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.
This material does not contain any substances that are assessed to be a PBT or vPvB

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 (EC-No.) 216-823-5 (REACH-No.) 01-2119456619-26	90 - 98	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Hydrocarbon resin	(CAS-No.) 9003-53-6 (EC-No.) 500-008-9	1 - 10	Repr. 1B, H360F

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

Specific Concentration Limits

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

Skin contact
Immediately 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

Substance	Condition
Aldehydes.	During combustion.
Hydrocarbons.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Ketones.	During combustion.
Toxic vapour, gas, particulate.	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. 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
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
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
No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

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

Derived no effect level (DNEL)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
bis-[4-(2,3-epoxipropoxi)phenyl]propane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3-epoxipropoxi)phenyl]propane		Worker	Dermal, Short-term exposure, Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3-epoxipropoxi)phenyl]propane		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	12.3 mg/m³
bis-[4-(2,3-epoxipropoxi)phenyl]propane		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]propane		Freshwater	0.003 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane		Freshwater sediments	0.5 mg/kg d.w.
bis-[4-(2,3-epoxipropoxi)phenyl]propane		Intermittent releases to water	0.013 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane		Marine water	0.0003 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane		Marine water sediments	0.5 mg/kg d.w.
bis-[4-(2,3-epoxipropoxi)phenyl]propane		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:

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

Applicable Norms/Standards
Use gloves tested to EN 374

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

Respiratory protection

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.
Colour	Colourless
Odor	Very Mild Odor
Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	>=148.9 ºC
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Flash point	>=148.9 ºC [*Test Method:*Closed Cup]
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	12,609 mm²/sec
Water solubility	Nil
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	<=86,659.3 Pa [@ 55 ºC]
Density	1.15 g/ml
Relative density	1.15 [*Ref Std:*WATER=1]
Relative Vapour Density	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	*Not applicable.*
Molecular weight	*No data available.*

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

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

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
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. May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Moderate irritant

Skin Sensitisation

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

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

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

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

Hydrocarbon resin	Ingestion	Toxic to female reproduction	Rat	NOAEL 5 mg/kg/day	premating into lactation

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 Duration
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	auditory system | heart | endocrine system | hematopoietic system | liver | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

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
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Activated sludge	Analogous Compound	3 hours	IC50	>100 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Green algae	Experimental	72 hours	ErC50	>11 mg/l

bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
Hydrocarbon resin	9003-53-6	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	117 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Hydrocarbon resin	9003-53-6	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
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	OECD 117 log Kow HPLC method
Hydrocarbon resin	9003-53-6	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
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Modeled Mobility in Soil	Koc	450 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of 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. 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.(LIQUID EPOXY RESIN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(LIQUID EPOXY RESIN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(LIQUID EPOXY RESIN)
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

Ingredient	CAS Nbr	Classification	Regulation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Gr. 3: Not classifiable	International Agency for Research on Cancer
Hydrocarbon resin	9003-53-6	Gr. 3: Not classifiable	International Agency 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.

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

Restriction status: listed in REACH Annex XVII
Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 for Conditions of Restriction

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional 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. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. 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.

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 environment	200	500

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.
H360F	May damage fertility.
H411	Toxic to aquatic life with long lasting effects.

Revision information:
Formulation: Section 16: Annex information was deleted.
Industrial Use of Adhesives: Section 16: Annex information was modified.
CLP: Ingredient table information was modified.
Label: CLP Classification information was modified.
Label: CLP Percent Unknown 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 - Skin/body information information was added.
Section 8: Skin protection - protective clothing information information was added.
Section 09: Kinematic Viscosity information information was modified.
Section 9: Vapour density value information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Target Organs - Repeated Table information was added.
Section 11: Target Organs - Repeated Table information was deleted.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was added.
Section 12: No Data text for mobility in soil information was deleted.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 14 Classification Code – Regulation Data information was modified.
Section 14 Hazard Class + Sub Risk – Regulation Data information was modified.
Section 14 Hazardous/Not Hazardous for Transportation information was modified.
Section 14 Multiplier – Main Heading information was deleted.
Section 14 Multiplier – Regulation Data information was deleted.
Section 14 Other Dangerous Goods – Regulation Data information was modified.
Section 14 Packing Group – Regulation Data information was modified.
Section 14 Proper Shipping Name information was modified.
Section 14 Segregation – Regulation Data information was modified.
Section 14 Transport Category – Main Heading information was deleted.
Section 14 Transport Category – Regulation Data information was deleted.
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was modified.
Section 14 Tunnel Code – Main Heading information was deleted.
Section 14 Tunnel Code – Regulation Data information was deleted.
Section 14 UN Number Column data information was modified.
Section 14 UN Number information was modified.
Section 14: Transportation classification information was deleted.
Section 15: Carcinogenicity information information was modified.
Section 15: Restrictions on manufacture ingredients information information was added.
Section 15: Seveso Hazard Category Text information was added.
Section 2: No PBT/vPvB information available warning 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	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 management 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.

3M Ireland MSDSs are available at www.3M.com

Safety Data Sheet

Document group:	11-2357-9	**Version number:**	20.03
Revision date:	04/05/2021	**Supersedes date:**	30/04/2020

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

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

1.1. Product identifier
3M™ Scotch-Weld™ Epoxy Potting Compound/Adhesive DP270 Clear, Part A

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.
This material has been tested for eye damage/irritation and the test results are reflected in the assigned classification.
This material has been tested for skin corrosion/irritation and the test results are reflected in the assigned classification.

CLASSIFICATION:
Acute Toxicity, Category 4 - Acute Tox. 4; H302
Acute Toxicity, Category 3 - Acute Tox. 3; H311
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Reproductive Toxicity, Category 2 - Repr. 2; H361
Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400

Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER.

Symbols
GHS06 (Skull and crossbones) |GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
4-nonylphenol, branched	84852-15-3	284-325-5	40 - 60
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	229-962-1	15 - 40
benzyl alcohol	100-51-6	202-859-9	1 - 10

HAZARD STATEMENTS:

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P273	Avoid release to the environment.
P280C	Wear protective gloves and protective clothing.

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.
P391	Collect spillage.

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

<=125 ml Hazard statements

H311	Toxic in contact with skin.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.

<=125 ml Precautionary statements

Prevention:
P280C Wear protective gloves and protective clothing.

10% of the mixture consists of components of unknown acute oral toxicity.
10% of the mixture consists of components of unknown acute dermal toxicity.

Contains 10% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4-nonylphenol, branched	(CAS-No.) 84852-15-3 (EC-No.) 284-325-5 (REACH-No.) 01-2119510715-45	40 - 60	Acute Tox. 4, H302 Skin Corr. 1B, H314 Repr. 2, H361df Aquatic Acute 1, H400,M=10 Aquatic Chronic 1, H410,M=10
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	(CAS-No.) 6864-37-5 (EC-No.) 229-962-1 (REACH-No.) 01-2119497829-12	15 - 40	Acute Tox. 2, H330 Acute Tox. 3, H311 Acute Tox. 4, H302 Skin Corr. 1A, H314 Aquatic Chronic 2, H411
Phenol, 2-nonyl-, branched	(CAS-No.) 91672-41-2 (EC-No.) 294-048-1	< 10	Substance not classified as hazardous
benzyl alcohol	(CAS-No.) 100-51-6 (EC-No.) 202-859-9	1 - 10	Acute Tox. 4, H332 Acute Tox. 4, H302
Dibenzyl Ether	(CAS-No.) 103-50-4 (EC-No.) 203-118-2	< 0.5	Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

Skin contact
Immediately wash with soap and water. Remove contaminated clothing. Get medical attention. Wash clothing before

reuse.

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

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

4.2. Most important symptoms and effects, both acute and delayed
No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

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

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Amine compounds.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Oxides of nitrogen.	During combustion.
Toxic vapour, gas, particulate.	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. 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 metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. 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
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. 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. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
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
No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

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

8.2. Exposure controls

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:
Indirect vented goggles.

Applicable Norms/Standards
Use eye protection conforming to EN 166

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

Material	Thickness (mm)	Breakthrough Time

Polymer laminate	No data available	No data available

Applicable Norms/Standards
Use gloves tested to EN 374

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

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 type A

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Colourless
Odor	Very Mild Odor, Pungent Odor
Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	205 ºC [*Details:*CONDITIONS: @ 760mm Hg (benzyl alcohol)]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Flash point	> 115.6 ºC [*Test Method:*Closed Cup]
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	
Kinematic Viscosity	13,500 mm²/sec
Water solubility	Slight (less than 10%)
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	13.3 Pa [*Details:*CONDITIONS: @ 86F (30C); 13.3mm Hg @ 212F (100C).]
Density	1 g/ml
Relative density	1 [*Ref Std:*WATER=1]
Relative Vapor Density	3.72 [*Ref Std:*AIR=1]

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	*No data available.*
Molecular weight	*No data available.*

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

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

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
Toxic in contact with skin.
Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, dryness, cracking, blistering, and pain.

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

Ingestion
Harmful if swallowed.
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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 ATE200 - 1,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE300 - 2,000 mg/kg
4-nonylphenol, branched	Dermal	Rabbit	LD50 > 2,000 mg/kg
4-nonylphenol, branched	Ingestion	Rat	LD50 1,531 mg/kg
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Dermal	Rabbit	LD50 > 200 mg/kg
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.42 mg/l
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Ingestion	Rat	LD50 > 320 mg/kg
benzyl alcohol	Inhalation-Dust/Mist (4 hours)	Rat	LC50 8.8 mg/l
benzyl alcohol	Ingestion	Rat	LD50 1,230 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	In vitro data	Irritant
4-nonylphenol, branched	Rabbit	Corrosive
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Rabbit	Corrosive
benzyl alcohol	Multiple animal species	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	similar health hazards	Severe irritant
4-nonylphenol, branched	Rabbit	Corrosive
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Rabbit	Corrosive
benzyl alcohol	Rabbit	Severe irritant

Skin Sensitisation

Name	Species	Value
4-nonylphenol, branched	Guinea pig	Not classified
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Guinea pig	Not classified
benzyl alcohol	Human and animal	Not classified

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

Germ Cell Mutagenicity

Name	Route	Value

4-nonylphenol, branched	In Vitro	Not mutagenic
4-nonylphenol, branched	In vivo	Not mutagenic
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	In Vitro	Not mutagenic
benzyl alcohol	In vivo	Not mutagenic
benzyl alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
benzyl alcohol	Ingestion	Multiple animal species	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
4-nonylphenol, branched	Ingestion	Not classified for male reproduction	Rat	NOAEL 400 mg/kg/day	28 days
4-nonylphenol, branched	Ingestion	Toxic to female reproduction	official classification	NOAEL Not available	
4-nonylphenol, branched	Ingestion	Toxic to development	official classification	NOAEL Not available	
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Ingestion	Not classified for male reproduction	Rat	NOAEL 12 mg/kg/day	3 months
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Inhalation	Not classified for male reproduction	Rat	NOAEL 0.048 mg/l	3 months
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Ingestion	Not classified for development	Rat	NOAEL 45 mg/kg/day	during gestation
benzyl alcohol	Ingestion	Not classified for development	Mouse	NOAEL 550 mg/kg/day	during organogenesis

Lactation

Name	Route	Species	Value
4-nonylphenol, branched	Ingestion	Rat	Not classified for effects on or via lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	
benzyl alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	
benzyl alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
benzyl alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4-nonylphenol, branched	Ingestion	endocrine system | hematopoietic system | liver	Not classified	Rat	NOAEL 400 mg/kg/day	28 days

4-nonylphenol, branched	Ingestion	kidney and/or bladder | heart | bone, teeth, nails, and/or hair | immune system | muscles | nervous system | respiratory system	Not classified	Rat	NOAEL 150 mg/kg/day	90 days
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.012 mg/l	3 months
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Inhalation	endocrine system | liver | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 0.048 mg/l	3 months
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Inhalation	skin	Not classified	Human	NOAEL Not available	occupational exposure
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.5 mg/kg/day	3 months
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Ingestion	hematopoietic system | liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 12 mg/kg/day	3 months
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	Ingestion	endocrine system | kidney and/or bladder	Not classified	Rat	NOAEL 60 mg/kg/day	3 months
benzyl alcohol	Ingestion	endocrine system | muscles | kidney and/or bladder	Not classified	Rat	NOAEL 400 mg/kg/day	13 weeks
benzyl alcohol	Ingestion	nervous system | respiratory system	Not classified	Mouse	NOAEL 645 mg/kg/day	8 days

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

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

11.2. Information on other hazards

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

SECTION 12: Ecological information

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

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
4-nonylphenol, branched	84852-15-3	Crustacea other	Experimental	96 hours	EC50	0.043 mg/l
4-nonylphenol, branched	84852-15-3	Diatom	Experimental	96 hours	EC50	0.027 mg/l
4-nonylphenol, branched	84852-15-3	Fathead minnow	Experimental	96 hours	LC50	0.128 mg/l

4-nonylphenol, branched	84852-15-3	Crustacea other	Experimental	28 days	NOEC	0.0039 mg/l
4-nonylphenol, branched	84852-15-3	Fathead minnow	Experimental	33 days	NOEC	0.0074 mg/l
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	Activated sludge	Experimental	30 minutes	EC20	160 mg/l
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	Bacteria	Experimental	17 hours	EC50	96 mg/l
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	Green Algae	Experimental	72 hours	EC50	7.9 mg/l
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	Medaka	Experimental	96 hours	LC50	22 mg/l
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	Water flea	Experimental	48 hours	EC50	4.6 mg/l
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	Green Algae	Experimental	72 hours	NOEC	0.13 mg/l
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	Water flea	Experimental	21 days	NOEC	4 mg/l
benzyl alcohol	100-51-6	Activated sludge	Experimental	3 hours	EC50	1,385 mg/l
benzyl alcohol	100-51-6	Fathead minnow	Experimental	96 hours	LC50	460 mg/l
benzyl alcohol	100-51-6	Green Algae	Experimental	72 hours	EC50	770 mg/l
benzyl alcohol	100-51-6	Water flea	Experimental	48 hours	EC50	230 mg/l
benzyl alcohol	100-51-6	Green Algae	Experimental	72 hours	NOEC	310 mg/l
benzyl alcohol	100-51-6	Water flea	Experimental	21 days	NOEC	51 mg/l
Phenol, 2-nonyl-, branched	91672-41-2		Data not available or insufficient for classification			N/A
Dibenzyl Ether	103-50-4	Green Algae	Experimental	72 hours	EC50	4.1 mg/l
Dibenzyl Ether	103-50-4	Medaka	Experimental	96 hours	LC50	6.8 mg/l
Dibenzyl Ether	103-50-4	Water flea	Experimental	48 hours	EC50	0.77 mg/l
Dibenzyl Ether	103-50-4	Green Algae	Experimental	72 hours	NOEC	1 mg/l
Dibenzyl Ether	103-50-4	Water flea	Experimental	21 days	NOEC	0.098 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
4-nonylphenol, branched	84852-15-3	Estimated Photolysis		Photolytic half-life (in air)	7.5 hours (t 1/2)	Non-standard method
4-nonylphenol, branched	84852-15-3	Experimental Biodegradation	28 days	CO2 evolution	53 % weight	OECD 301B - Modified sturm or CO2
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
benzyl alcohol	100-51-6	Experimental Biodegradation	14 days	BOD	94 % BOD/ThBOD	OECD 301C - MITI test (I)
Phenol, 2-nonyl-, branched	91672-41-2	Data not availbl-insufficient			N/A	
Dibenzyl Ether	103-50-4	Experimental	14 days	BOD	0 % weight	OECD 301C - MITI test (I)

		Biodegradation				

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
4-nonylphenol, branched	84852-15-3	Experimental BCF - Other	16 days	Bioaccumulation factor	2168	Non-standard method
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	6864-37-5	Experimental BCF-Carp	60 days	Bioaccumulation factor	60	OECD 305E - Bioaccumulation flow-through fish test
benzyl alcohol	100-51-6	Experimental Bioconcentration		Log Kow	1.10	Non-standard method
Phenol, 2-nonyl-, branched	91672-41-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Dibenzyl Ether	103-50-4	Experimental BCF-Carp	14 days	Bioaccumulation factor	<=429	Non-standard method

12.4. Mobility in soil
No test data available.

12.5. Results of the PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of 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

ADR: UN2810; Toxic Liquid, Organic, N.O.S. (4,4-Methylenebis(2-Methylcyclohexylamine; 4-NONYL PHENOL,BRANCHED); 6.1; III; (E); T1.

IATA: UN2810; Toxic Liquid, Organic, N.O.S. (4,4-Methylenebis(2-Methylcyclohexylamine; 4-NONYL PHENOL,BRANCHED); 6.1; III.
IMDG: UN2810; Toxic Liquid, Organic, N.O.S. (4,4-Methylenebis(2-Methylcyclohexylamine; 4-NONYL PHENOL,BRANCHED); 6.1; III; FA, SA.

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

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

Ingredient	CAS Nbr
4-nonylphenol, branched	84852-15-3

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 the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional 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. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. 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.

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.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H361df	Suspected of damaging fertility. Suspected of damaging the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Revision information:
EU Section 09: pH information information was added.
Section 1: Emergency telephone 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.
Section 03: Composition table % Column heading information was added.
Section 3: Composition/ Information of ingredients table information was modified.
Section 03: Substance not applicable information was added.
Section 04: Information on toxicological effects information was modified.
Section 9: Evaporation Rate information information was deleted.
Section 9: Explosive properties information information was deleted.
Section 09: Kinematic Viscosity information information was added.
Section 9: Melting point information information was modified.
Section 9: Oxidising properties information information was deleted.
Section 9: pH information information was deleted.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.
Section 11: Classification disclaimer information was modified.
Section 11: No endocrine disruptor information available warning information was added.
Section 11: Reproductive Hazards information information was deleted.
Section 11: Reproductive/developmental effects information information was added.
Section 12: 12.6. Endocrine Disrupting Properties information was added.
Section 12: 12.7. Other adverse effects information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Contact manufacturer for more detail. information was deleted.
Section 12: No Data text for mobility in soil information was added.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 14 Classification Code – Main Heading information was added.
Section 14 Classification Code – Regulation Data information was added.
Section 14 Control Temperature – Main Heading information was added.
Section 14 Control Temperature – Regulation Data information was added.
Section 14 Disclaimer Information information was added.
Section 14 Emergency Temperature – Main Heading information was added.
Section 14 Emergency Temperature – Regulation Data information was added.
Section 14 Hazard Class + Sub Risk – Main Heading information was added.
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.
Section 14 Hazardous/Not Hazardous for Transportation information was added.
Section 14 Multiplier – Main Heading information was added.
Section 14 Multiplier – Regulation Data information was added.
Section 14 Other Dangerous Goods – Main Heading information was added.
Section 14 Other Dangerous Goods – Regulation Data information was added.
Section 14 Packing Group – Main Heading information was added.
Section 14 Packing Group – Regulation Data information was added.
Section 14 Proper Shipping Name information was added.
Section 14 Regulations – Main Headings information was added.
Section 14 Segregation – Regulation Data information was added.
Section 14 Segregation Code – Main Heading information was added.
Section 14 Special Precautions – Main Heading information was added.
Section 14 Special Precautions – Regulation Data information was added.
Section 14 Transport Category – Main Heading information was added.

Section 14 Transport Category – Regulation Data information was added.
Section 14 Transport in bulk – Regulation Data information was added.
Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.
Section 14 Transport Not Permitted – Main Heading information was added.
Section 14 Transport Not Permitted – Regulation Data information was added.
Section 14 Tunnel Code – Main Heading information was added.
Section 14 Tunnel Code – Regulation Data information was added.
Section 14 UN Number Column data information was added.
Section 14 UN Number information was added.
Section 14: Transportation classification information was added.
Section 15: Label remarks and EU Detergent information was deleted.
Section 15: Regulations - Inventories information was added.

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