

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

3MTM SCOTCH-WELDTM DP-460 Off-White Epoxy Structural Adhesive (Part B)

Product Identification Numbers

UU-0116-0155-4

7100270164

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: ner-productstewardship@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

3MTM SCOTCH-WELDTM DP-460 Off-White Epoxy Structural Adhesive (Part B)

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) |







Ingredients:

Ingredient CAS Nbr EC No. % by Wt

bis-[4-(2,3-epoxipropoxi)phenyl]propane 1675-54-3 216-823-5 80 - 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:

P280E Wear protective gloves.

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.

11% of the mixture consists of components of unknown acute oral toxicity.

Contains 11% 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 | 80 - 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 | 7 - 13 | Substance not classified as hazardous |

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

| 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. |
| 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

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

For industrial/occupational use only. Not for consumer sale or use. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after

handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

Store away from strong bases. Store away from amines.

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 | 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 | | | exposure, Systemic | |
| ane | | | effects | |
| bis-[4-(2,3- | | Worker | Inhalation, Long-term | 12.3 mg/m ³ |
| epoxipropoxi)phenyl]prop | | | exposure (8 hours), | |
| ane | | | Systemic effects | |
| bis-[4-(2,3- | | Worker | Inhalation, Short-term | 12.3 mg/m ³ |
| epoxipropoxi)phenyl]prop | | | exposure, Systemic | |
| ane | | | effects | |

Predicted no effect concentrations (PNEC)

| Ingredient | Degradation Product | Compartment | PNEC |
|---|------------------------|--------------------------------|----------------|
| bis-[4-(2,3- epoxipropoxi)phenyl]propa ne | | 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. |

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| bis-[4-(2,3- | Sewage Treatment Plant | 10 mg/l |
|---------------------------|------------------------|---------|
| epoxipropoxi)phenyl]propa | | |
| ne | | |

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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 | >0.30 | =>8 hours |
| Polyvinyl alcohol (PVA). | >0.30 | 4-8 hours |

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

Applicable Norms/Standards Use gloves tested to EN 374

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

Respiratory protection

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

| into mation on basic physical and elemical prop | | |
|---|---|--|
| Physical state | Liquid. | |
| Specific Physical Form: | Paste | |
| Colour | Off-White | |
| Odor | Light Epoxy | |
| 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) | Not applicable. | |
| Flammable Limits(UEL) | Not applicable. | |
| Flash point | >=101 °C [Test Method:Closed Cup] | |
| Autoignition temperature | No data available. | |
| Decomposition temperature | No data available. | |
| pH | substance/mixture is non-soluble (in water) | |
| Kinematic Viscosity | 13,158 mm ² /sec | |
| Water solubility | No data available. | |
| Solubility- non-water | No data available. | |
| Partition coefficient: n-octanol/water | No data available. | |
| Density | 1.12 - 1.17 g/ml | |
| Relative density | 1.12 - 1.17 [Ref Std:WATER=1] | |
| Relative Vapour Density | Not applicable. | |
| | | |
| Particle Characteristics | Not applicable. | |
| | | |
| | I | |

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds0.1 % weightEvaporation rateNo data available.Molecular weightNo data available.Percent volatile<=1 % weight</th>

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non reactive under normal use conditions

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

Amines.

Strong bases.

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

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.

Eve 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 |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

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

Serious Eve Damage/Irritation

| Name | Species | Value |
|------|---------|-------|
| | | |

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

Skin Sensitisation

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

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 |

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]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 |

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]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 |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|-----------|--------------------------------|----------|-----------------------------|-------------|-------------------------------------|
| bis-[4-(2,3- epoxipropoxi)phenyl]propa ne | | Experimental Biodegradation | 28 days | BOD | | OECD 301F - Manometric respirometry |
| bis-[4-(2,3- epoxipropoxi)phenyl]propa ne | 1675-54-3 | Experimental Hydrolysis | | Hydrolytic half-life (pH 7) | ` | OECD 111 Hydrolysis func of pH |

12.3 : Bioaccumulative potential

| Material | Cas No. | Test type | Duration | Study Type | Test result | Protocol |
|---------------------------|-----------|------------------|----------|------------|-------------|-----------------------|
| bis-[4-(2,3- | 1675-54-3 | Experimental | | Log Kow | 3.242 | OECD 117 log Kow HPLC |
| epoxipropoxi)phenyl]propa | | Bioconcentration | | | | method |
| ne | | | | | | |

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 | | | | | |

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. If no other disposal options are available, waste product—that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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 | ENVIRONMENTALLY | ENVIRONMENTALLY | ENVIRONMENTALLY |
| name | HAZARDOUS | HAZARDOUS SUBSTANCE, | HAZARDOUS |
| | SUBSTANCE, LIQUID, | LIQUID, N.O.S.(LIQUID | SUBSTANCE, LIQUID, |
| | N.O.S.(EPOXY RESIN) | EPOXY RESIN) | 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. |
| 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

IngredientCAS NbrClassificationRegulationbis-[4-(2,3-epoxipropoxi)phenyl]propane1675-54-3Gr. 3: Not classifiableInternational 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.

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

Global inventory status

Contact 3M for more information.

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

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

Revision information:

Section 1: E-mail address information was modified.

Section 6: Accidental release personal information information was modified.

Section 7: Conditions safe storage information was modified.

Section 09: Odor 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 management 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 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 | |
| | |
| 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; |
| | Physical state:Liquid. General operating conditions: Duration of use: 8 hours/day; Emission days per year: 220 days/year; |
| 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; 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: |
| Operating Conditions Risk management measures Waste management measures | 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; 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; Do not apply industrial sludge to natural soils; |
| Operating Conditions Risk management measures | 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; 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; Do not apply industrial sludge to natural soils; |
| Operating Conditions Risk management measures Waste management measures 3. Prediction of exposure Prediction of exposure | 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; 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; Do not apply industrial sludge to natural soils; Prevent discharge of undissolved substance to or recover from wastewater; Human and environmental exposures are not expected to exceed the DNELs and |
| Operating Conditions Risk management measures Waste management measures 3. Prediction of exposure | 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; 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; Do not apply industrial sludge to natural soils; Prevent discharge of undissolved substance to or recover from wastewater; Human and environmental exposures are not expected to exceed the DNELs and |
| Operating Conditions Risk management measures Waste management measures 3. Prediction of exposure Prediction of exposure 1. Title | 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; 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; Do not apply industrial sludge to natural soils; Prevent discharge of undissolved substance to or recover from wastewater; Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. bis-[4-(2,3-epoxipropoxi)phenyl]propane; EC No. 216-823-5; |

| Contributing activities | PROC 13 -Treatment of articles by dipping and pouring | |
|--|--|--|
| | 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 management measures | | |
| Operating Conditions | Physical state:Liquid. | |
| | General operating conditions: | |
| | Application Temperature:: <= 40 degree Celsius; | |
| | Duration of use: 8 hours/day; | |
| | Indoors with good general ventilation; | |
| | | |
| Risk management measures | Under the operational conditions described above the following risk management 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. | |

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