



## Safety Data Sheet

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|                                       |                   |                         |            |
|---------------------------------------|-------------------|-------------------------|------------|
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| <b>Transportation version number:</b> | 9.00 (18/09/2019) |                         |            |

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

Epoxy Structural Adhesive Scotch-Weld™ DP410

#### Product Identification Numbers

UU-0101-3327-8      UU-0101-3328-6

7100200494      7100200495

#### 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:

07-7184-0, 18-9393-2

### TRANSPORTATION INFORMATION

UU-0101-3327-8, UU-0101-3328-6

#### Component 1

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

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

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

## Component 2

**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 EXEMPTION, (LIQUID EPOXY RESIN), III.

## KIT LABEL

### 2.1. Classification of the substance or mixture

#### CLP REGULATION (EC) No 1272/2008

#### CLASSIFICATION:

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

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

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

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

For full text of H phrases, see Section 16.

### 2.2. Label elements

#### CLP REGULATION (EC) No 1272/2008

#### SIGNAL WORD

DANGER.

#### Symbols:

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

#### Pictograms



#### Contains:

Nitric acid, calcium salt, tetrahydrate; bis-[4-(2,3-epoxipropoxy)phenyl]propane; 3,3'-Oxybis(ethyleneoxy)bis(propylamine); 2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane; 2,4,6-tris(dimethylaminomethyl)phenol

#### HAZARD STATEMENTS:

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

H411 Toxic to aquatic life with long lasting effects.

## PRECAUTIONARY STATEMENTS

### Prevention:

|       |                                                                       |
|-------|-----------------------------------------------------------------------|
| P260A | Do not breathe vapours.                                               |
| P280D | Wear protective gloves, protective clothing, and eye/face protection. |

### Response:

|                     |                                                                                                                                  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------|
| P303 + P361 + P353A | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.                           |
| P305 + P351 + P338  | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310                | Immediately call a POISON CENTRE or doctor/physician.                                                                            |

### Disposal:

|      |                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------|
| P501 | Dispose of contents/container in accordance with applicable local/regional/national/international regulations. |
|------|----------------------------------------------------------------------------------------------------------------|

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

#### <=125 ml Hazard statements

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

#### <=125 ml Precautionary statements

### Prevention:

|       |                                                                       |
|-------|-----------------------------------------------------------------------|
| P260A | Do not breathe vapours.                                               |
| P280D | Wear protective gloves, protective clothing, and eye/face protection. |

### Response:

|                     |                                                                                                                                  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------|
| P303 + P361 + P353A | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.                           |
| P305 + P351 + P338  | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310                | Immediately call a POISON CENTRE or doctor/physician.                                                                            |
| P333 + P313         | If skin irritation or rash occurs: Get medical advice/attention.                                                                 |

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

### Revision information:

Section 1: Emergency telephone information was modified.

Section 1: Product name information was modified.



## Safety Data Sheet

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|                        |            |                         |            |
|------------------------|------------|-------------------------|------------|
| <b>Document group:</b> | 07-7184-0  | <b>Version number:</b>  | 18.00      |
| <b>Revision date:</b>  | 19/07/2023 | <b>Supersedes date:</b> | 08/02/2023 |

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 Structural Adhesive DP410 Off-White: Part A

#### 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

|                   |                                                                             |
|-------------------|-----------------------------------------------------------------------------|
| <b>Address:</b>   | 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18. |
| <b>Telephone:</b> | +353 1 280 3555                                                             |
| <b>E Mail:</b>    | tox.uk@mmm.com                                                              |
| <b>Website:</b>   | 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 1B - Skin Corr. 1B; H314  
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318  
Skin Sensitization, Category 1 - Skin Sens. 1; H317

For full text of H phrases, see Section 16.

#### 2.2. Label elements

CLP REGULATION (EC) No 1272/2008

## SIGNAL WORD

DANGER.

## Symbols

GHS05 (Corrosion) | GHS07 (Exclamation mark) |

## Pictograms



## Ingredients:

| Ingredient                               | CAS Nbr    | EC No.    | % by Wt |
|------------------------------------------|------------|-----------|---------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | 4246-51-9  | 224-207-2 | 30 - 70 |
| Nitric acid, calcium salt, tetrahydrate  | 13477-34-4 | 233-332-1 | 7 - 13  |
| 2,4,6-tris(dimethylaminomethyl)phenol    | 90-72-2    | 202-013-9 | 7 - 13  |

## HAZARD STATEMENTS:

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

## PRECAUTIONARY STATEMENTS

### Prevention:

|       |                                                                       |
|-------|-----------------------------------------------------------------------|
| P260A | Do not breathe vapours.                                               |
| P280D | Wear protective gloves, protective clothing, and eye/face protection. |

### Response:

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

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

### <=125 ml Hazard statements

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

### <=125 ml Precautionary statements

### Prevention:

|       |                                                                       |
|-------|-----------------------------------------------------------------------|
| P260A | Do not breathe vapours.                                               |
| P280D | Wear protective gloves, protective clothing, and eye/face protection. |

### Response:

|                    |                                                                                                        |
|--------------------|--------------------------------------------------------------------------------------------------------|
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if                 |

P310 present and easy to do. Continue rinsing.  
 P333 + P313 Immediately call a POISON CENTRE or doctor/physician.  
 If skin irritation or rash occurs: Get medical advice/attention.

25% of the mixture consists of components of unknown acute oral toxicity.

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

### 2.3. Other hazards

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] |
|------------------------------------------|----------------------------------------------------------------------------|---------|-----------------------------------------------------------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | (CAS-No.) 4246-51-9<br>(EC-No.) 224-207-2<br>(REACH-No.) 01-2119963377-26  | 30 - 70 | Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317   |
| Amine terminated adduct                  | Trade Secret                                                               | 10 - 30 | Substance not classified as hazardous                           |
| Nitric acid, calcium salt, tetrahydrate  | (CAS-No.) 13477-34-4<br>(EC-No.) 233-332-1<br>(REACH-No.) 01-2119495093-35 | 7 - 13  | Acute Tox. 4, H302<br>Eye Dam. 1, H318                          |
| 2,4,6-tris(dimethylaminomethyl)phenol    | (CAS-No.) 90-72-2<br>(EC-No.) 202-013-9<br>(REACH-No.) 01-2119560597-27    | 7 - 13  | Acute Tox. 4, H302<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318   |
| Bis[(dimethylamino)methyl]phenol         | (CAS-No.) 71074-89-0<br>(EC-No.) 275-162-0                                 | < 5     | Acute Tox. 4, H302<br>Skin Corr. 1C, H314                       |

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

#### Eye contact

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

#### If swallowed

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

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

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

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

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

Overexposure to this product may result in methemoglobinemia. Methemoglobinemia may be clinically suspected by the presence of clinical "cyanosis" in the presence of a normal PaO<sub>2</sub> (as obtained by arterial blood gases). Routine pulse oximetry may be inaccurate for monitoring oxygen saturation in the presence of methemoglobinemia, and should not be used to make the diagnosis of this disorder. If the patient is symptomatic or if the methemoglobin level is >20%, specific therapy with methylene blue should be considered as part of the medical management.

## SECTION 5: Fire-fighting measures

#### 5.1. Extinguishing media

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

#### 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

#### Hazardous Decomposition or By-Products

| <u>Substance</u>    | <u>Condition</u>   |
|---------------------|--------------------|
| Aldehydes.          | During combustion. |
| Amine compounds.    | During combustion. |
| Carbon monoxide     | During combustion. |
| Carbon dioxide.     | During combustion. |
| Hydrogen Chloride   | During combustion. |
| Oxides of nitrogen. | During combustion. |

#### 5.3. Advice for fire-fighters

When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, tunic and trousers (leggings), 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.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

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

**6.4. Reference to other sections**

Refer to Section 8 and Section 13 for more information

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

For industrial/occupational use only. Not for consumer sale or use. 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. Wash contaminated clothing before reuse.

**7.2. Conditions for safe storage including any incompatibilities**

Store away from heat. Store away from acids.

**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                  |
|------------------------------------------|---------------------|------------|------------------------------------------------------------|-----------------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) |                     | Worker     | Dermal, Long-term exposure (8 hours), Systemic effects     | 8.3 mg/kg bw/d        |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) |                     | Worker     | Inhalation, Long-term exposure (8 hours), Local effects    | 1 mg/m <sup>3</sup>   |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) |                     | Worker     | Inhalation, Long-term exposure (8 hours), Systemic effects | 59 mg/m <sup>3</sup>  |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) |                     | Worker     | Inhalation, Short-term exposure, Local effects             | 13 mg/m <sup>3</sup>  |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) |                     | Worker     | Inhalation, Short-term exposure, Systemic effects          | 176 mg/m <sup>3</sup> |

**Predicted no effect concentrations (PNEC)**

| Ingredient                               | Degradation Product | Compartment          | PNEC             |
|------------------------------------------|---------------------|----------------------|------------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) |                     | Freshwater           | 0.22 mg/l        |
| 3,3'-                                    |                     | Freshwater sediments | 0.809 mg/kg d.w. |

|                                          |  |                                |                   |
|------------------------------------------|--|--------------------------------|-------------------|
| Oxybis(ethyleneoxy)bis(propylamine)      |  |                                |                   |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) |  | Intermittent releases to water | 2.2 mg/l          |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) |  | Marine water                   | 0.022 mg/l        |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) |  | Marine water sediments         | 0.0809 mg/kg d.w. |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) |  | Sewage Treatment Plant         | 125 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

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

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

Full face shield.

Indirect vented goggles.

#### *Applicable Norms/Standards*

Use eye/face protection conforming to EN 166

#### Skin/hand protection

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

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

| Material        | Thickness (mm) | Breakthrough Time |
|-----------------|----------------|-------------------|
| Butyl rubber.   | 0.7            | =>8 hours         |
| Neoprene.       | 0.5            | =>8 hours         |
| Nitrile rubber. | 0.4            | =>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 – Butyl rubber

Neoprene apron.

Apron – Nitrile

## Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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

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

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

### Applicable Norms/Standards

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

## 8.2.3. Environmental exposure controls

Refer to Annex

# SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Physical state                         | Solid.                                      |
| Specific Physical Form:                | Thixotropic paste                           |
| Colour                                 | Off-White                                   |
| Odor                                   | Amine                                       |
| Odour threshold                        | No data available.                          |
| Melting point/freezing point           | Not applicable.                             |
| Boiling point/boiling range            | Not applicable.                             |
| Flammability (solid, gas)              | Not classified                              |
| Flammable Limits(LEL)                  | Not applicable.                             |
| Flammable Limits(UEL)                  | Not applicable.                             |
| Flash point                            | >=100 °C [Test Method:Closed Cup]           |
| Autoignition temperature               | Not applicable.                             |
| Decomposition temperature              | No data available.                          |
| pH                                     | substance/mixture is non-soluble (in water) |
| Kinematic Viscosity                    | No data available.                          |
| Water solubility                       | Negligible                                  |
| Solubility- non-water                  | No data available.                          |
| Partition coefficient: n-octanol/water | No data available.                          |
| Vapour pressure                        | Not applicable.                             |
| Density                                | 1.09 - 1.12 g/ml                            |
| Relative density                       | 1.09 - 1.12 [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.    |
| Percent volatile              | <=1 % weight       |

## 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.

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.

### 10.6 Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| None known.      |                  |

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

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

#### Signs and Symptoms of Exposure

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

#### Inhalation

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

#### Skin contact

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

#### Eye contact

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

#### Ingestion

Harmful if swallowed.

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

### Additional Health Effects:

#### Single exposure may cause target organ effects:

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

### Toxicological Data

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

#### Acute Toxicity

| Name                                     | Route     | Species           | Value                                                   |
|------------------------------------------|-----------|-------------------|---------------------------------------------------------|
| Overall product                          | Dermal    |                   | No data available; calculated ATE >2,000 - =5,000 mg/kg |
| Overall product                          | Ingestion |                   | No data available; calculated ATE >300 - =2,000 mg/kg   |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | Dermal    | Rabbit            | LD50 2,525 mg/kg                                        |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | Ingestion | Rat               | LD50 2,850 mg/kg                                        |
| Nitric acid, calcium salt, tetrahydrate  | Ingestion | Rat               | LD50 >300, <2000 mg/kg                                  |
| Nitric acid, calcium salt, tetrahydrate  | Dermal    | similar compounds | LD50 > 2,000 mg/kg                                      |
| 2,4,6-tris(dimethylaminomethyl)phenol    | Dermal    | Rat               | LD50 1,280 mg/kg                                        |
| 2,4,6-tris(dimethylaminomethyl)phenol    | Ingestion | Rat               | LD50 1,000 mg/kg                                        |
| Bis[(dimethylamino)methyl]phenol         | Ingestion |                   | LD50 estimated to be 300 - 2,000 mg/kg                  |

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

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

#### Serious Eye Damage/Irritation

| Name                                     | Species           | Value     |
|------------------------------------------|-------------------|-----------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | Rabbit            | Corrosive |
| Nitric acid, calcium salt, tetrahydrate  | Rabbit            | Corrosive |
| 2,4,6-tris(dimethylaminomethyl)phenol    | Rabbit            | Corrosive |
| Bis[(dimethylamino)methyl]phenol         | similar compounds | Corrosive |

#### Skin Sensitisation

| Name                                     | Species                | Value          |
|------------------------------------------|------------------------|----------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | Professional judgement | Sensitising    |
| Nitric acid, calcium salt, tetrahydrate  | similar                | Not classified |

**3M™ Scotch-Weld™ Epoxy Structural Adhesive DP410 Off-White: Part A**

|                                       |            |                |
|---------------------------------------|------------|----------------|
|                                       | compounds  |                |
| 2,4,6-tris(dimethylaminomethyl)phenol | Guinea pig | 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         |
|------------------------------------------|----------|---------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | In Vitro | Not mutagenic |
| Nitric acid, calcium salt, tetrahydrate  | In Vitro | Not mutagenic |
| 2,4,6-tris(dimethylaminomethyl)phenol    | In Vitro | Not mutagenic |

**Carcinogenicity**

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

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

| Name                                     | Route     | Value                                  | Species           | Test result           | Exposure Duration        |
|------------------------------------------|-----------|----------------------------------------|-------------------|-----------------------|--------------------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | Ingestion | Not classified for female reproduction | Rat               | NOAEL 600 mg/kg/day   | premating into lactation |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | Ingestion | Not classified for male reproduction   | Rat               | NOAEL 600 mg/kg/day   | 59 days                  |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | Ingestion | Not classified for development         | Rat               | NOAEL 600 mg/kg/day   | premating into lactation |
| Nitric acid, calcium salt, tetrahydrate  | Ingestion | Not classified for female reproduction | similar compounds | NOAEL 1,500 mg/kg/day | premating into lactation |
| Nitric acid, calcium salt, tetrahydrate  | Ingestion | Not classified for male reproduction   | similar compounds | NOAEL 1,500 mg/kg/day | 28 days                  |
| Nitric acid, calcium salt, tetrahydrate  | Ingestion | Not classified for development         | similar compounds | NOAEL 1,500 mg/kg/day | premating into lactation |

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

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

**Specific Target Organ Toxicity - repeated exposure**

| Name                                     | Route     | Target Organ(s)                                                                     | Value          | Species | Test result         | Exposure Duration |
|------------------------------------------|-----------|-------------------------------------------------------------------------------------|----------------|---------|---------------------|-------------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | Ingestion | gastrointestinal tract   heart   endocrine system   bone, teeth, nails, and/or hair | Not classified | Rat     | NOAEL 600 mg/kg/day | 59 days           |

|                                         |           |                                                                                                                                                                                                         |                |                   |                       |         |
|-----------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------|-----------------------|---------|
|                                         |           | hematopoietic system   liver   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system                                                           |                |                   |                       |         |
| Nitric acid, calcium salt, tetrahydrate | Ingestion | heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system | Not classified | similar compounds | NOAEL 1,500 mg/kg/day | 28 days |
| 2,4,6-tris(dimethylaminomethyl) phenol  | Dermal    | skin   liver   nervous system   auditory system   hematopoietic system   eyes                                                                                                                           | Not classified | Rat               | NOAEL 125 mg/kg/day   | 28 days |

#### Aspiration Hazard

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

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

#### 11.2. Information on other hazards

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

### SECTION 12: Ecological information

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

#### 12.1. Toxicity

No product test data available.

| Material                                 | CAS #     | Organism    | Type         | Exposure | Test endpoint | Test result |
|------------------------------------------|-----------|-------------|--------------|----------|---------------|-------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | 4246-51-9 | Bacteria    | Experimental | 17 hours | EC50          | 4,000 mg/l  |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | 4246-51-9 | Golden Orfe | Experimental | 96 hours | LC50          | >1,000 mg/l |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | 4246-51-9 | Green algae | Experimental | 72 hours | EC50          | >500 mg/l   |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | 4246-51-9 | Water flea  | Experimental | 48 hours | EC50          | 218.16 mg/l |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | 4246-51-9 | Green algae | Experimental | 72 hours | EC10          | 5.4 mg/l    |

|                                         |              |                |                                                       |          |      |            |
|-----------------------------------------|--------------|----------------|-------------------------------------------------------|----------|------|------------|
| (propylamine)                           |              |                |                                                       |          |      |            |
| Amine terminated adduct                 | Trade Secret | N/A            | Data not available or insufficient for classification | N/A      | N/A  | N/A        |
| Nitric acid, calcium salt, tetrahydrate | 13477-34-4   | Guppy          | Estimated                                             | 96 hours | LC50 | 1,378 mg/l |
| Nitric acid, calcium salt, tetrahydrate | 13477-34-4   | Fathead minnow | Estimated                                             | 30 days  | NOEC | 58 mg/l    |
| 2,4,6-tris(dimethylaminomethyl)phenol   | 90-72-2      | N/A            | Experimental                                          | 96 hours | LC50 | 718 mg/l   |
| 2,4,6-tris(dimethylaminomethyl)phenol   | 90-72-2      | Common Carp    | Experimental                                          | 96 hours | LC50 | >100 mg/l  |
| 2,4,6-tris(dimethylaminomethyl)phenol   | 90-72-2      | Green algae    | Experimental                                          | 72 hours | EC50 | 46.7 mg/l  |
| 2,4,6-tris(dimethylaminomethyl)phenol   | 90-72-2      | Water flea     | Experimental                                          | 48 hours | EC50 | >100 mg/l  |
| 2,4,6-tris(dimethylaminomethyl)phenol   | 90-72-2      | Green algae    | Experimental                                          | 72 hours | NOEC | 6.44 mg/l  |
| Bis[(dimethylamino)methyl]phenol        | 71074-89-0   | N/A            | Data not available or insufficient for classification | N/A      | N/A  | NA         |

## 12.2. Persistence and degradability

| Material                                 | CAS Nbr      | Test type                          | Duration | Study Type                    | Test result                        | Protocol                          |
|------------------------------------------|--------------|------------------------------------|----------|-------------------------------|------------------------------------|-----------------------------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | 4246-51-9    | Experimental Biodegradation        | 25 days  | CO2 evolution                 | -8 %CO2 evolution/THC O2 evolution | OECD 301B - Modified sturm or CO2 |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | 4246-51-9    | Estimated Photolysis               |          | Photolytic half-life (in air) | 2.96 hours (t 1/2)                 |                                   |
| Amine terminated adduct                  | Trade Secret | Data not available or insufficient | N/A      | N/A                           | N/A                                | N/A                               |
| Nitric acid, calcium salt, tetrahydrate  | 13477-34-4   | Data not available or insufficient | N/A      | N/A                           | N/A                                | N/A                               |
| 2,4,6-tris(dimethylaminomethyl)phenol    | 90-72-2      | Experimental Biodegradation        | 28 days  | BOD                           | 4 %BOD/ThO D                       | OECD 301D - Closed bottle test    |
| Bis[(dimethylamino)methyl]phenol         | 71074-89-0   | Modeled Biodegradation             | 28 days  | BOD                           | 41 %CO2 evolution/THC O2 evolution | Catalogic™                        |

## 12.3 : Bioaccumulative potential

| Material                                 | Cas No.      | Test type                                             | Duration | Study Type             | Test result | Protocol                        |
|------------------------------------------|--------------|-------------------------------------------------------|----------|------------------------|-------------|---------------------------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | 4246-51-9    | Experimental Bioconcentration                         |          | Log Kow                | -1.25       |                                 |
| Amine terminated adduct                  | Trade Secret | Estimated Bioconcentration                            |          | Bioaccumulation factor | 2.9         |                                 |
| Nitric acid, calcium salt, tetrahydrate  | 13477-34-4   | Data not available or insufficient for classification | N/A      | N/A                    | N/A         | N/A                             |
| 2,4,6-tris(dimethylaminomethyl)phenol    | 90-72-2      | Experimental Bioconcentration                         |          | Log Kow                | -0.66       | 830.7550 Part.Coeff Shake Flask |
| Bis[(dimethylamino)methyl]phenol         | 71074-89-0   | Modeled Bioconcentration                              |          | Log Kow                | -2.34       | ACD/Labs ChemSketch™            |

#### 12.4. Mobility in soil

| Material                                 | Cas No.   | Test type                | Study Type | Test result | Protocol             |
|------------------------------------------|-----------|--------------------------|------------|-------------|----------------------|
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine) | 4246-51-9 | Modeled Mobility in Soil | Koc        | 1 l/kg      | ACD/Labs ChemSketch™ |

#### 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)                                                            |
|-------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <b>14.1 UN number or ID number</b>  | UN3263                                                                             | UN3263                                                                             | UN3263                                                                             |
| <b>14.2 UN proper shipping name</b> | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.(3,3'-OXYBIS(ETHYLENEOXY) BIS(PROPYLAMINE)) | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.(3,3'-OXYBIS(ETHYLENEOXY) BIS(PROPYLAMINE)) | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.(3,3'-OXYBIS(ETHYLENEOXY) BIS(PROPYLAMINE)) |

|                                                                   |                                                                        |                                                                        |                                                                        |
|-------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|
| <b>14.3 Transport hazard class(es)</b>                            | 8                                                                      | 8                                                                      | 8                                                                      |
| <b>14.4 Packing group</b>                                         | II                                                                     | II                                                                     | II                                                                     |
| <b>14.5 Environmental hazards</b>                                 | Not Environmentally Hazardous                                          | Not applicable                                                         | Not a Marine Pollutant                                                 |
| <b>14.6 Special precautions for user</b>                          | 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. |
| <b>14.7 Marine Transport in bulk according to IMO instruments</b> | No data available.                                                     | No data available.                                                     | No data available.                                                     |
| <b>Control Temperature</b>                                        | No data available.                                                     | No data available.                                                     | No data available.                                                     |
| <b>Emergency Temperature</b>                                      | No data available.                                                     | No data available.                                                     | No data available.                                                     |
| <b>ADR Classification Code</b>                                    | C8                                                                     | Not applicable.                                                        | Not applicable.                                                        |
| <b>IMDG Segregation Code</b>                                      | Not applicable.                                                        | Not applicable.                                                        | 18 - ALKALIS                                                           |

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

#### Global inventory status

Contact 3M for more information. 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  
None

Seveso named dangerous substances, Annex 1, Part 2  
None

#### Regulation (EU) No 649/2012

No chemicals listed

### 15.2. Chemical Safety Assessment

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

## **SECTION 16: Other information**

### **List of relevant H statements**

|      |                                          |
|------|------------------------------------------|
| H302 | Harmful if swallowed.                    |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction.     |
| H318 | Causes serious eye damage.               |

### **Revision information:**

Formulation: Section 16: Annex information was modified.

Professional Use of Adhesives: Section 16: Annex information was modified.

Section 2: <125ml Hazard - Environmental information was deleted.

Section 2: <125ml Precautionary - Prevention information was modified.

CLP: Ingredient table information was modified.

Label: CLP Classification information was modified.

Label: CLP Environmental Hazard Statements information was deleted.

Label: CLP Percent Unknown information was added.

Label: CLP Percent Unknown information was deleted.

Label: CLP Percent Unknown information was modified.

Label: CLP Precautionary - Prevention information was modified.

Section 3: Composition/ Information of ingredients table information was modified.

Section 03: SCL table information was deleted.

Section 6: Accidental release personal information information was modified.

Section 7: Precautions safe handling information information was modified.

Section 8: DNEL table row information was modified.

Section 8: PNEC table row information was modified.

Section 8: Skin protection - protective clothing information information was modified.

Section 11: Acute Toxicity table information was modified.

Section 11: Carcinogenicity Table information was deleted.

Section 11: Carcinogenicity text information was added.

Section 11: Germ Cell Mutagenicity Table information was modified.

Section 11: Reproductive Toxicity Table information was modified.

Section 11: Respiratory Sensitization Table information was deleted.

Section 11: Respiratory Sensitization text information was added.

Section 11: Serious Eye Damage/Irritation Table information was modified.

Section 11: Skin Corrosion/Irritation Table information was modified.

Section 11: Skin Sensitization Table information was modified.

Section 11: Target Organs - Repeated Table information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Mobility in soil information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Biocumulative potential information information was modified.

Section 15: Carcinogenicity information information was deleted.

Section 15: Restrictions on manufacture ingredients information information was deleted.

Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

## **Annex**

|                                                               |                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Title</b>                                               |                                                                                                                                                                                                                                                                                                                                             |
| <b>Substance identification</b>                               |                                                                                                                                                                                                                                                                                                                                             |
| <b>Exposure Scenario Name</b>                                 | Formulation                                                                                                                                                                                                                                                                                                                                 |
| <b>Lifecycle Stage</b>                                        | Formulation or re-packing                                                                                                                                                                                                                                                                                                                   |
| <b>Contributing activities</b>                                | PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing)<br>ERC 02 -Formulation into mixture                                                                                                                                                                                            |
| <b>Processes, tasks and activities covered</b>                | Batch manufacture of a chemical substance or formulation (including polymerisation reactions).                                                                                                                                                                                                                                              |
| <b>2. Operational conditions and risk management measures</b> |                                                                                                                                                                                                                                                                                                                                             |
| <b>Operating Conditions</b>                                   | <b>Physical state:</b> Liquid.<br><b>General operating conditions:</b><br>Duration of use: 8 hours/day;<br>Emission days per year: <= 225 days per year;                                                                                                                                                                                    |
| <b>Risk management measures</b>                               | Under the operational conditions described above the following risk management measures apply:<br><b>General risk management measures:</b><br><b>Human health:</b><br>Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.;<br><b>Environmental:</b><br>Waste Water treatment - Incineration; |
| <b>Waste management measures</b>                              | Do not apply industrial sludge to natural soils;<br>Prevent leaks and prevent soil / water pollution caused by leaks;                                                                                                                                                                                                                       |
| <b>3. Prediction of exposure</b>                              |                                                                                                                                                                                                                                                                                                                                             |
| <b>Prediction of exposure</b>                                 | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.                                                                                                                                                                                                  |

|                                                               |                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Title</b>                                               |                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Substance identification</b>                               | 3,3'-Oxybis(ethyleneoxy)bis(propylamine);<br>EC No. 224-207-2;<br>CAS Nbr 4246-51-9;                                                                                                                                                                                                                                                                                         |
| <b>Exposure Scenario Name</b>                                 | Industrial Transfer                                                                                                                                                                                                                                                                                                                                                          |
| <b>Lifecycle Stage</b>                                        | Use at industrial sites                                                                                                                                                                                                                                                                                                                                                      |
| <b>Contributing activities</b>                                | PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities<br>ERC 02 -Formulation into mixture                                                                                                                                                                                                                                            |
| <b>Processes, tasks and activities covered</b>                | Transfer of substance/mixture with dedicated engineering controls.                                                                                                                                                                                                                                                                                                           |
| <b>2. Operational conditions and risk management measures</b> |                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Operating Conditions</b>                                   | <b>Physical state:</b> Liquid.<br><b>General operating conditions:</b><br>Duration of use: 8 hours/day;<br>Frequency of exposure at workplace [for one worker]: 5 days/week;<br>Processing Temperature:: 20 degree Celsius;                                                                                                                                                  |
| <b>Risk management measures</b>                               | Under the operational conditions described above the following risk management measures apply:<br><b>General risk management measures:</b><br><b>Human health:</b><br>Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Refer to Section 8 of the SDS for specific glove material.;<br><b>Environmental:</b><br>None needed; |

|                                  |                                                                                                                                            |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Waste management measures</b> | Do not release to waterways or sewers;<br>Incinerate in a permitted hazardous waste incinerator;                                           |
| <b>3. Prediction of exposure</b> |                                                                                                                                            |
| <b>Prediction of exposure</b>    | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted. |

|                                                               |                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Title</b>                                               |                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Substance identification</b>                               | 3,3'-Oxybis(ethyleneoxy)bis(propylamine);<br>EC No. 224-207-2;<br>CAS Nbr 4246-51-9;                                                                                                                                                                                                                                                                                         |
| <b>Exposure Scenario Name</b>                                 | Industrial Use of Adhesives                                                                                                                                                                                                                                                                                                                                                  |
| <b>Lifecycle Stage</b>                                        | Use at industrial sites                                                                                                                                                                                                                                                                                                                                                      |
| <b>Contributing activities</b>                                | PROC 13 -Treatment of articles by dipping and pouring<br>ERC 06d -Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)                                                                                                                                                                                     |
| <b>Processes, tasks and activities covered</b>                | Application of product through a mixing nozzle                                                                                                                                                                                                                                                                                                                               |
| <b>2. Operational conditions and risk management measures</b> |                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Operating Conditions</b>                                   | <b>Physical state:</b> Liquid.<br><b>General operating conditions:</b><br>Duration of use: 8 hours/day;<br>Frequency of exposure at workplace [for one worker]: 5 days/week;<br>Processing Temperature:: 20 degree Celsius;                                                                                                                                                  |
| <b>Risk management measures</b>                               | Under the operational conditions described above the following risk management measures apply:<br><b>General risk management measures:</b><br><b>Human health:</b><br>Wear chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. Refer to Section 8 of the SDS for specific glove material.;<br><b>Environmental:</b><br>None needed; |
| <b>Waste management measures</b>                              | Do not release to waterways or sewers;<br>Incinerate in a permitted hazardous waste incinerator;                                                                                                                                                                                                                                                                             |
| <b>3. Prediction of exposure</b>                              |                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Prediction of exposure</b>                                 | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.                                                                                                                                                                                                                                   |

|                                                               |                                                                                                                                                                                                                                     |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Title</b>                                               |                                                                                                                                                                                                                                     |
| <b>Substance identification</b>                               |                                                                                                                                                                                                                                     |
| <b>Exposure Scenario Name</b>                                 | Industrial Use of Adhesives                                                                                                                                                                                                         |
| <b>Lifecycle Stage</b>                                        | Use at industrial sites                                                                                                                                                                                                             |
| <b>Contributing activities</b>                                | PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities<br>PROC 13 -Treatment of articles by dipping and pouring<br>ERC 05 -Use at industrial site leading to inclusion into/onto article |
| <b>Processes, tasks and activities covered</b>                | 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.                             |
| <b>2. Operational conditions and risk management measures</b> |                                                                                                                                                                                                                                     |
| <b>Operating Conditions</b>                                   | <b>Physical state:</b> Liquid.<br><b>General operating conditions:</b><br>Duration of use: 8 hours/day;<br>Emission days per year: 220 days/year;                                                                                   |

|                                  |                                                                                                                                                                                                                                                                                                                    |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | Frequency of exposure at workplace [for one worker]: 5 days/week;                                                                                                                                                                                                                                                  |
| <b>Risk management measures</b>  | Under the operational conditions described above the following risk management measures apply:<br><b>General risk management measures:</b><br><b>Human health:</b><br>Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.;<br><b>Environmental:</b><br>None needed; |
| <b>Waste management measures</b> | Do not apply industrial sludge to natural soils;<br>Prevent discharge of undissolved substance to or recover from wastewater;                                                                                                                                                                                      |
| <b>3. Prediction of exposure</b> |                                                                                                                                                                                                                                                                                                                    |
| <b>Prediction of exposure</b>    | Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.                                                                                                                                                                         |

|                                                               |                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Title</b>                                               |                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Substance identification</b>                               |                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Exposure Scenario Name</b>                                 | Professional Use of Adhesives                                                                                                                                                                                                                                                                                                                                             |
| <b>Lifecycle Stage</b>                                        | Widespread use by professional workers                                                                                                                                                                                                                                                                                                                                    |
| <b>Contributing activities</b>                                | PROC 13 -Treatment of articles by dipping and pouring<br>ERC 08c -Widespread use leading to inclusion into/onto article (indoor)<br>ERC 08f -Widespread use leading to inclusion into/onto article (outdoor)                                                                                                                                                              |
| <b>Processes, tasks and activities covered</b>                | Application of product with applicator gun.                                                                                                                                                                                                                                                                                                                               |
| <b>2. Operational conditions and risk management measures</b> |                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Operating Conditions</b>                                   | <b>Physical state:</b> Liquid.<br><b>General operating conditions:</b><br>Application Temperature:: <= 40 degree Celsius;<br>Duration of use: 8 hours/day;<br>Indoors with good general ventilation;                                                                                                                                                                      |
| <b>Risk management measures</b>                               | Under the operational conditions described above the following risk management measures apply:<br><b>General risk management measures:</b><br><b>Human health:</b><br>Goggles - Chemical resistant;<br>Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.;<br><b>Environmental:</b><br>Industrial Sewage Treatment Plant; |
| <b>Waste management measures</b>                              | No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:                                                                                                                                                                                                                                       |
| <b>3. Prediction of exposure</b>                              |                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Prediction of exposure</b>                                 | 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](http://www.3M.com)**



## Safety Data Sheet

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|                                       |            |                         |            |
|---------------------------------------|------------|-------------------------|------------|
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| <b>Transportation version number:</b> |            |                         |            |

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

Epoxy Structural Adhesive Scotch-Weld™ DP410 : 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:

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

For full text of H phrases, see Section 16.

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

WARNING.

**Symbols:**

GHS07 (Exclamation mark) | GHS09 (Environment) |

**Pictograms****Ingredients:**

| Ingredient                                                                                       | CAS Nbr    | EC No.    | % by Wt |
|--------------------------------------------------------------------------------------------------|------------|-----------|---------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                                                          | 1675-54-3  | 216-823-5 | 40 - 80 |
| 2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane | 71033-08-4 | 275-143-7 | 5 - 15  |

**HAZARD STATEMENTS:**

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

**PRECAUTIONARY STATEMENTS****Prevention:**

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

**Response:**

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

**Disposal:**

|      |                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------|
| P501 | Dispose of contents/container in accordance with applicable local/regional/national/international regulations. |
|------|----------------------------------------------------------------------------------------------------------------|

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

**<=125 ml Hazard statements**

|      |                                      |
|------|--------------------------------------|
| H317 | May cause an allergic skin reaction. |
|------|--------------------------------------|

**<=125 ml Precautionary statements****Prevention:**

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

**Response:**

P333 + P313

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

25% of the mixture consists of components of unknown acute oral toxicity.

Contains 52% of components with unknown hazards to the aquatic environment.

**2.3. Other hazards**

None known.

**SECTION 3: Composition/information on ingredients**

| Ingredient                                                                                       | CAS Nbr      | EC No.    | REACH<br>Registration<br>No. | % by<br>Wt | Classification                                                                         |
|--------------------------------------------------------------------------------------------------|--------------|-----------|------------------------------|------------|----------------------------------------------------------------------------------------|
| bis-[4-(2,3-epoxypropoxy)phenyl]propane                                                          | 1675-54-3    | 216-823-5 |                              | 40 - 80    | Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317<br>Aquatic Chronic 2, H411 |
| 2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane | 71033-08-4   | 275-143-7 |                              | 5 - 15     | Skin Irrit. 2, H315; Skin Sens. 1, H317                                                |
| Acrylic copolymer                                                                                | Trade Secret |           |                              | < 15       | Substance not classified as hazardous                                                  |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane                                                    | 2530-83-8    | 219-784-2 | 01-2119513212-58             | < 2        | Eye Dam. 1, H318                                                                       |
| Siloxanes and Silicones, di-Me, reaction products with silica                                    | 67762-90-7   |           |                              | < 2        | Substance with an occupational exposure limit                                          |

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

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

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

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

**Skin contact**

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

**Eye contact**

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

**If swallowed**

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

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

See Section 11.1 Information on toxicological effects

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

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

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

### 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

### Hazardous Decomposition or By-Products

| <u>Substance</u>           | <u>Condition</u>   |
|----------------------------|--------------------|
| Aldehydes.                 | During combustion. |
| Carbon monoxide            | During combustion. |
| Carbon dioxide.            | During combustion. |
| Hydrogen Chloride          | During combustion. |
| Irritant vapours or gases. | During combustion. |

### 5.3. Advice for fire-fighters

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

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

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

### 6.2. Environmental precautions

Avoid release to the environment. 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

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

agents (eg. chlorine, chromic acid etc.)

## 7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids. Store away from oxidising agents.

## 7.3. Specific end use(s)

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

# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

### Occupational exposure limits

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

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

UK HSC : UK Health and Safety Commission  
TWA: Time-Weighted-Average  
STEL: Short Term Exposure Limit  
CEIL: Ceiling

### Biological limit values

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

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

## 8.2. Exposure controls

### 8.2.1. Engineering controls

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

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

#### Applicable Norms/Standards

Use eye protection conforming to EN 166

#### Skin/hand protection

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

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

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

#### *Applicable Norms/Standards*

Use gloves tested to EN 374

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

#### **Respiratory protection**

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

## **SECTION 9: Physical and chemical properties**

### **9.1. Information on basic physical and chemical properties**

#### **Appearance**

**Physical state**  
**Colour**

Liquid.  
Off-White

#### **Specific Physical Form:**

Paste

#### **Odor**

Mild Epoxy

#### **Odour threshold**

*No data available.*

#### **pH**

*No data available.*

#### **Boiling point/boiling range**

$\geq 200$  °C

#### **Melting point**

*Not applicable.*

#### **Flammability (solid, gas)**

Not applicable.

#### **Explosive properties**

Not classified

#### **Oxidising properties**

Not classified

#### **Flash point**

$> 93.3$  °C [Test Method: Closed Cup]

#### **Autoignition temperature**

*Not applicable.*

#### **Flammable Limits(LEL)**

*Not applicable.*

#### **Flammable Limits(UEL)**

*Not applicable.*

#### **Vapour pressure**

*No data available.*

#### **Relative density**

approximately 1.15 [ @ 23 °C ] [Ref Std: WATER=1]

#### **Water solubility**

*No data available.*

#### **Solubility- non-water**

*No data available.*

#### **Partition coefficient: n-octanol/water**

*No data available.*

#### **Evaporation rate**

*Not applicable.*

#### **Vapour density**

*No data available.*

#### **Decomposition temperature**

*No data available.*

#### **Viscosity**

$\geq 60$  Pa-s [ @ 23 °C ] [Test Method: Brookfield]

#### **Density**

1.13 g/ml

## 9.2. Other information

EU Volatile Organic Compounds  
Percent volatile

*No data available.*  
≤ 1 % weight

## 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.

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

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| None known.      |                  |

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

### 11.1 Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

#### Inhalation

No health effects are expected.

#### Skin contact

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

#### Eye contact

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

**Ingestion**

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

**Toxicological Data**

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

**Acute Toxicity**

| Name                                                                                             | Route                          | Species                | Value                                          |
|--------------------------------------------------------------------------------------------------|--------------------------------|------------------------|------------------------------------------------|
| Overall product                                                                                  | Dermal                         |                        | No data available; calculated ATE >5,000 mg/kg |
| Overall product                                                                                  | Ingestion                      |                        | No data available; calculated ATE >5,000 mg/kg |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                                                          | Dermal                         | Rat                    | LD50 > 1,600 mg/kg                             |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                                                          | Ingestion                      | Rat                    | LD50 > 1,000 mg/kg                             |
| Acrylic copolymer                                                                                | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg             |
| Acrylic copolymer                                                                                | Ingestion                      | Rat                    | LD50 > 5,000 mg/kg                             |
| 2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane | Dermal                         | Professional judgement | LD50 estimated to be > 5,000 mg/kg             |
| 2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane | Ingestion                      | Rat                    | LD50 > 2,000 mg/kg                             |
| Siloxanes and Silicones, di-Me, reaction products with silica                                    | Dermal                         | Rabbit                 | LD50 > 5,000 mg/kg                             |
| Siloxanes and Silicones, di-Me, reaction products with silica                                    | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 0.691 mg/l                              |
| Siloxanes and Silicones, di-Me, reaction products with silica                                    | Ingestion                      | Rat                    | LD50 > 5,110 mg/kg                             |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane                                                    | Dermal                         | Rabbit                 | LD50 4,000 mg/kg                               |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane                                                    | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 5.3 mg/l                                |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane                                                    | Ingestion                      | Rat                    | LD50 7,010 mg/kg                               |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

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

**Serious Eye Damage/Irritation**

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

**Skin Sensitisation**

| Name                                                                                             | Species                | Value       |
|--------------------------------------------------------------------------------------------------|------------------------|-------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                                                          | Human and animal       | Sensitising |
| 2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane | Professional judgement | Sensitising |

|                                                               |                  |                |
|---------------------------------------------------------------|------------------|----------------|
|                                                               | t                |                |
| Siloxanes and Silicones, di-Me, reaction products with silica | Human and animal | Not classified |
| [3-(2,3-Epoxypropoxy)propyl] trimethoxysilane                 | Guinea pig       | Not classified |

**Respiratory Sensitisation**

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

**Germ Cell Mutagenicity**

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

**Carcinogenicity**

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

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

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

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

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

**Specific Target Organ Toxicity - repeated exposure**

| Name                                                          | Route      | Target Organ(s)                                                                                                                                                         | Value          | Species | Test result           | Exposure Duration     |
|---------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------|-----------------------|-----------------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                       | Dermal     | liver                                                                                                                                                                   | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 2 years               |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                       | Dermal     | nervous system                                                                                                                                                          | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 13 weeks              |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                       | Ingestion  | auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder                                                                | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 28 days               |
| Siloxanes and Silicones, di-Me, reaction products with silica | Inhalation | respiratory system   silicosis                                                                                                                                          | Not classified | Human   | NOAEL Not available   | occupational exposure |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane                  | Ingestion  | heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   kidney and/or bladder   respiratory system | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 28 days               |

**Aspiration Hazard**

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

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

**SECTION 12: Ecological information**

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

**12.1. Toxicity**

No product test data available.

| Material                                | CAS #     | Organism      | Type      | Exposure | Test endpoint | Test result |
|-----------------------------------------|-----------|---------------|-----------|----------|---------------|-------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 1675-54-3 | Rainbow trout | Estimated | 96 hours | LC50          | 2 mg/l      |

|                                                                                                  |              |                 |                                                       |          |      |            |
|--------------------------------------------------------------------------------------------------|--------------|-----------------|-------------------------------------------------------|----------|------|------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                                                          | 1675-54-3    | Water flea      | Estimated                                             | 48 hours | EC50 | 1.8 mg/l   |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                                                          | 1675-54-3    | Green Algae     | Experimental                                          | 72 hours | EC50 | >11 mg/l   |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                                                          | 1675-54-3    | Green Algae     | Experimental                                          | 72 hours | NOEC | 4.2 mg/l   |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane                                                          | 1675-54-3    | Water flea      | Experimental                                          | 21 days  | NOEC | 0.3 mg/l   |
| 2,2'-[(1-Methylethylidene)bis[4,1-phenyleneoxy[1-(butoxymethyl)ethylene]oxymethylene]]bisoxirane | 71033-08-4   |                 | Data not available or insufficient for classification |          |      |            |
| Acrylic copolymer                                                                                | Trade Secret |                 | Data not available or insufficient for classification |          |      |            |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane                                                     | 2530-83-8    | Common Carp     | Experimental                                          | 96 hours | LC50 | 55 mg/l    |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane                                                     | 2530-83-8    | Crustacea other | Experimental                                          | 48 hours | LC50 | 324 mg/l   |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane                                                     | 2530-83-8    | Green algae     | Experimental                                          | 96 hours | EC50 | 350 mg/l   |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane                                                     | 2530-83-8    | Green Algae     | Experimental                                          | 96 hours | NOEC | 130 mg/l   |
| [3-(2,3-Epoxypropoxy)propyl]trimethoxysilane                                                     | 2530-83-8    | Water flea      | Experimental                                          | 21 days  | NOEC | >=100 mg/l |
| Siloxanes and Silicones, di-Me, reaction products with silica                                    | 67762-90-7   |                 | Data not available or insufficient for classification |          |      |            |

## 12.2. Persistence and degradability

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

**12.3 : Bioaccumulative potential**

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

**12.4. Mobility in soil**

Please contact manufacturer for more details

**12.5. Results of the PBT and vPvB assessment**

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

**12.6. Other adverse effects**

No information available.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

**EU waste code (product as sold)**

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

## SECTION 14: Transportation information

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

IATA: UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LIQUID EPOXY RESIN); 9; III.

ADR: UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LIQUID EPOXY RESIN); 9; III; (-); M6.

Exemption: For vessels containing a net quantity of 5 l or a net mass of 5 kg or less per single or inner packaging , special provision 375 (ADR), exemption per 2.10.2.7 (IMDG) or special provision A197 (IATA) may be applied, if applicable

## SECTION 15: Regulatory information

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

#### Carcinogenicity

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

#### Ingredient

#### CAS Nbr

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

### 15.2. Chemical Safety Assessment

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

## SECTION 16: Other information

### List of relevant H statements

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

#### Revision information:

Section 1: Emergency telephone information was modified.

Section 1: Product name information was modified.

Label: CLP Percent Unknown information was modified.

Section 3: Composition/ Information of ingredients table information was modified.

Section 5: Fire - Advice for fire fighters information information was modified.

Section 8: Occupational exposure limit table information was modified.

Section 9: Relative density information information was modified.

Section 11: Acute Toxicity table information was modified.

Section 11: Germ Cell Mutagenicity Table information was modified.

Section 11: Serious Eye Damage/Irritation Table information was modified.

Section 11: Skin Corrosion/Irritation Table information was modified.

Section 11: Skin Sensitization Table information was modified.

Section 11: Specific Target Organ Toxicity - single exposure text information was deleted.

Section 11: Target Organs - Single Table information was added.

Section 12: Component ecotoxicity information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Bioaccumulative potential information information was modified.

Section 14: Transportation classification information was modified.

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](http://www.3M.com)**