



## Safety Data Sheet

Copyright,2021, 3M Company All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

|                        |            |                         |            |
|------------------------|------------|-------------------------|------------|
| <b>Document group:</b> | 35-9443-9  | <b>Version number:</b>  | 3.00       |
| <b>Revision date:</b>  | 11/05/2021 | <b>Supersedes date:</b> | 16/04/2020 |

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

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

#### 1.1. Product identifier

3M(tm) Scotch-Weld(tm) 7240 B/A FR : Part A

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

##### Identified uses

Industrial use.

#### 1.3. Details of the supplier of the safety data sheet

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

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

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

##### CLASSIFICATION:

Skin Corrosion/Irritation, Category 1B - Skin Corr. 1B; H314  
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318  
Skin Sensitization, Category 1A - Skin Sens. 1A; H317  
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336  
Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400  
Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

For full text of H phrases, see Section 16.

## 2.2. Label elements

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

#### SIGNAL WORD

DANGER.

#### Symbols

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

#### Pictograms



#### Ingredients:

| Ingredient   | CAS Nbr    | EC No.    | % by Wt |
|--|------------|-----------|---------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | 68911-25-1 |           | 15 - 40 |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated | 68683-29-4 |           | 10 - 30 |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)   | 4246-51-9  | 224-207-2 | 7 - 13  |
| 2,4,6-tris(dimethylaminomethyl)phenol  | 90-72-2    | 202-013-9 | 5 - 10  |
| 2-Ethyl-4-methylimidazole  | 931-36-2   | 213-234-5 | 1 - 5   |
| 2-piperazin-1-ylethylamine   | 140-31-8   | 205-411-0 | < 1     |

#### HAZARD STATEMENTS:

|      |   |
|------|---|
| H314 | Causes severe skin burns and eye damage.              |
| H317 | May cause an allergic skin reaction.                  |
| H336 | May cause drowsiness or dizziness.                    |
| H410 | Very toxic to aquatic life with long lasting effects. |

#### PRECAUTIONARY STATEMENTS

##### Prevention:

|       |   |
|-------|---|
| P260B | Do not breathe dust.  |
| P273  | Avoid release to the environment.                                     |
| 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.  |

5% of the mixture consists of components of unknown acute dermal toxicity.

Contains 3% of components with unknown hazards to the aquatic environment.

### 2.3. Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Ingredient   | Identifier(s)  | %         | Classification according to Regulation (EC) No. 1272/2008 [CLP]   |
|--|--|-----------|---|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | (CAS-No.) 68911-25-1   | 15 - 40   | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1A, H317<br>STOT SE 3, H336<br>Aquatic Acute 1, H400,M=1<br>Aquatic Chronic 1, H410,M=1 |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated | (CAS-No.) 68683-29-4   | 10 - 30   | Skin Irrit. 2, H315<br>Skin Sens. 1A, H317  |
| Aluminium hydroxide  | (CAS-No.) 21645-51-2<br>(EC-No.) 244-492-7<br>(REACH-No.) 01-2119529246-39 | 10 - 30   | Substance with a national occupational exposure limit   |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)   | (CAS-No.) 4246-51-9<br>(EC-No.) 224-207-2<br>(REACH-No.) 01-2119963377-26  | 7 - 13    | Skin Sens. 1, H317<br>Skin Corr. 1B, H314   |
| 2,4,6-tris(dimethylaminomethyl)phenol  | (CAS-No.) 90-72-2<br>(EC-No.) 202-013-9<br>(REACH-No.) 01-2119560597-27    | 5 - 10    | Acute Tox. 4, H302<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318   |
| Oxide glass chemicals  | (CAS-No.) 65997-17-3<br>(EC-No.) 266-046-0                                 | 1 - 5     | Substance with a national occupational exposure limit   |
| Nitric acid, calcium salt, tetrahydrate  | (CAS-No.) 13477-34-4<br>(EC-No.) 233-332-1<br>(REACH-No.) 01-2119495093-35 | 1 - 5     | Acute Tox. 4, H302<br>Eye Dam. 1, H318  |
| 2-Ethyl-4-methylimidazole  | (CAS-No.) 931-36-2<br>(EC-No.) 213-234-5                                   | 1 - 5     | Acute Tox. 4, H302<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1B, H317  |
| Siloxanes and Silicones, di-Me, reaction products with silica  | (CAS-No.) 67762-90-7   | 1 - 5     | Substance with a national occupational exposure limit   |
| Bis[(dimethylamino)methyl]phenol   | (CAS-No.) 71074-89-0<br>(EC-No.) 275-162-0                                 | 0.5 - 1.5 | Acute Tox. 4, H302<br>Skin Corr. 1C, H314   |
| 2-piperazin-1-ylethylamine   | (CAS-No.) 140-31-8   | < 1       | Acute Tox. 3, H311  |

|  |                    |  |  |
|--|--------------------|--|--|
|  | (EC-No.) 205-411-0 |  | Acute Tox. 4, H302<br>Skin Corr. 1B, H314<br>Skin Sens. 1B, H317<br>Aquatic Chronic 3, H412<br>Repr. 2, H361d<br>STOT RE 1, H372 |
|--|--------------------|--|--|

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). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

### 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

#### Substance

Amine compounds.  
Carbon monoxide

#### Condition

During combustion.  
During combustion.

Carbon dioxide.  
Oxides of nitrogen.

During combustion.  
During combustion.

### 5.3. Advice for fire-fighters

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

## SECTION 6: Accidental release measures

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

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

### 6.2. Environmental precautions

Avoid release to the environment.

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

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

### 6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

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

Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases. 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 |
|-------------------------|------------|--------|---|---------------------|
| DUST, INERT OR NUISANCE | 21645-51-2 | UK HSC | TWA(as respirable dust):4 mg/m3;TWA(as inhalable dust):10 mg/m3 |                     |
| Glass, oxide, chemicals | 65997-17-3 | UK HSC | TWA(as fiber):5 mg/m3(1 fibers/ml)                              |                     |

|                       |            |                         |   |
|-----------------------|------------|-------------------------|---|
| Oxide glass chemicals | 65997-17-3 | Manufacturer determined | TWA(as non-fibrous, respirable)(8 hours):3 mg/m <sup>3</sup> ;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m <sup>3</sup> |
| 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.

### Derived no effect level (DNEL)

| Ingredient                             | Degradation Product | Population | Human exposure pattern                                     | DNEL                   |
|--|---------------------|------------|--|------------------------|
| 2,4,6-tris(dimethylaminomethyl) phenol |                     | Worker     | Inhalation, Long-term exposure (8 hours), Systemic effects | 0.31 mg/m <sup>3</sup> |

### Predicted no effect concentrations (PNEC)

| Ingredient                             | Degradation Product | Compartment                    | PNEC        |
|--|---------------------|--------------------------------|-------------|
| 2,4,6-tris(dimethylaminomethyl) phenol |                     | Freshwater                     | 0.084 mg/l  |
| 2,4,6-tris(dimethylaminomethyl) phenol |                     | Intermittent releases to water | 0.84 mg/l   |
| 2,4,6-tris(dimethylaminomethyl) phenol |                     | Marine water                   | 0.0084 mg/l |
| 2,4,6-tris(dimethylaminomethyl) phenol |                     | Sewage Treatment Plant         | 0.2 mg/l    |

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

## 8.2. Exposure controls

In addition, refer to the annex for more information.

### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

Full face shield.  
Indirect vented goggles.

*Applicable Norms/Standards*

Use eye/face protection conforming to EN 166

**Skin/hand protection**

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

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

| <b>Material</b>  | <b>Thickness (mm)</b> | <b>Breakthrough Time</b> |
|------------------|-----------------------|--------------------------|
| Polymer laminate | No data available     | No data available        |

*Applicable Norms/Standards*

Use gloves tested to EN 374

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

**Respiratory protection**

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

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

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

*Applicable Norms/Standards*

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

**8.2.3. Environmental exposure controls**

Refer to Annex

## SECTION 9: Physical and chemical properties

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

|                                     |                           |
|-------------------------------------|---------------------------|
| <b>Physical state</b>               | Solid.                    |
| <b>Specific Physical Form:</b>      | Paste                     |
| <b>Colour</b>                       | Off-White                 |
| <b>Odor</b>                         | Amine                     |
| <b>Odour threshold</b>              | <i>No data available.</i> |
| <b>Melting point/freezing point</b> | <i>No data available.</i> |
| <b>Boiling point/boiling range</b>  | <i>No data available.</i> |
| <b>Flammability (solid, gas)</b>    | Not classified            |
| <b>Flammable Limits(LEL)</b>        | <i>Not applicable.</i>    |
| <b>Flammable Limits(UEL)</b>        | <i>Not applicable.</i>    |
| <b>Flash point</b>                  | >=100 °C                  |
| <b>Autoignition temperature</b>     | <i>No data available.</i> |
| <b>Decomposition temperature</b>    | <i>No data available.</i> |

|  |                            |
|--|----------------------------|
| pH                                     |                            |
| Kinematic Viscosity                    | 80.36 mm <sup>2</sup> /sec |
| Water solubility                       | No data available.         |
| Solubility- non-water                  | No data available.         |
| Partition coefficient: n-octanol/water | No data available.         |
| Vapour pressure                        | Not applicable.            |
| Density                                | No data available.         |
| Relative density                       | 1.12 [Ref Std:WATER=1]     |
| Relative Vapor Density                 | Not applicable.            |

## 9.2. Other information

### 9.2.2 Other safety characteristics

|                               |                    |
|-------------------------------|--------------------|
| EU Volatile Organic Compounds | No data available. |
| Evaporation rate              | Not applicable.    |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

Heat.

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 bases.

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 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**

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**

May be 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. Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

#### **Reproductive/Developmental Toxicity:**

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

#### **Toxicological Data**

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

#### **Acute Toxicity**

| Name   | Route     | Species          | Value   |
|--|-----------|------------------|---|
| Overall product  | Dermal    |                  | No data available; calculated ATE >5,000 mg/kg        |
| Overall product  | Ingestion |                  | No data available; calculated ATE 2,000 - 5,000 mg/kg |
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | Dermal    | Rat              | LD50 > 2,000 mg/kg                                    |
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | Ingestion | Rat              | LD50 > 2,000 mg/kg                                    |
| Aluminium hydroxide  | Dermal    |                  | LD50 estimated to be > 5,000 mg/kg                    |
| Aluminium hydroxide  | Ingestion | Rat              | LD50 > 5,000 mg/kg                                    |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated | Dermal    | Rabbit           | LD50 > 3,000 mg/kg                                    |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated | Ingestion | Rat              | LD50 > 15,300 mg/kg                                   |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)   | Dermal    | Rabbit           | LD50 2,500 mg/kg                                      |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)   | Ingestion | Rat              | LD50 3,160 mg/kg                                      |
| 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                                      |
| 2-Ethyl-4-methylimidazole  | Ingestion | Rat              | LD50 681 mg/kg  |
| Nitric acid, calcium salt, tetrahydrate  | Ingestion | Rat              | LD50 >300, <2000 mg/kg                                |
| Nitric acid, calcium salt, tetrahydrate  | Dermal    | similar compound | LD50 > 2,000 mg/kg                                    |

|   |                                |        |  |
|---|--------------------------------|--------|--|
| Oxide glass chemicals   | Dermal                         |        | LD50 estimated to be > 5,000 mg/kg       |
| Oxide glass chemicals   | Ingestion                      |        | LD50 estimated to be 2,000 - 5,000 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                       |
| Bis[(dimethylamino)methyl]phenol                              | Ingestion                      |        | LD50 estimated to be 300 - 2,000 mg/kg   |
| 2-piperazin-1-ylethylamine                                    | Dermal                         | Rabbit | LD50 865 mg/kg                           |
| 2-piperazin-1-ylethylamine                                    | Ingestion                      | Rat    | LD50 1,470 mg/kg                         |

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

| Name   | Species                | Value                     |
|--|------------------------|---------------------------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | Rat                    | Irritant                  |
| Aluminium hydroxide  | Rabbit                 | No significant irritation |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated | Rabbit                 | Irritant                  |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)   | Rabbit                 | Corrosive                 |
| 2,4,6-tris(dimethylaminomethyl)phenol  | Rabbit                 | Corrosive                 |
| 2-Ethyl-4-methylimidazole  | Rabbit                 | Corrosive                 |
| Nitric acid, calcium salt, tetrahydrate  | similar compounds      | No significant irritation |
| Oxide glass chemicals  | Professional judgement | No significant irritation |
| Siloxanes and Silicones, di-Me, reaction products with silica  | Rabbit                 | No significant irritation |
| Bis[(dimethylamino)methyl]phenol   | similar compounds      | Corrosive                 |
| 2-piperazin-1-ylethylamine   | Rabbit                 | Corrosive                 |

### Serious Eye Damage/Irritation

| Name   | Species                | Value                     |
|--|------------------------|---------------------------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | In vitro data          | Severe irritant           |
| Aluminium hydroxide  | Rabbit                 | No significant irritation |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated | Rabbit                 | Mild irritant             |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)   | similar health hazards | Corrosive                 |
| 2,4,6-tris(dimethylaminomethyl)phenol  | Rabbit                 | Corrosive                 |
| 2-Ethyl-4-methylimidazole  | Rabbit                 | Corrosive                 |
| Nitric acid, calcium salt, tetrahydrate  | Rabbit                 | Corrosive                 |
| Oxide glass chemicals  | Professional judgement | No significant irritation |
| Siloxanes and Silicones, di-Me, reaction products with silica  | Rabbit                 | No significant irritation |
| Bis[(dimethylamino)methyl]phenol   | similar compounds      | Corrosive                 |
| 2-piperazin-1-ylethylamine   | Rabbit                 | Corrosive                 |

### Skin Sensitisation

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

|  |                   |                |
|--|-------------------|----------------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | Guinea pig        | Sensitising    |
| Aluminium hydroxide  | Guinea pig        | Not classified |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated | Guinea pig        | Sensitising    |
| 2,4,6-tris(dimethylaminomethyl)phenol  | Guinea pig        | Not classified |
| 2-Ethyl-4-methylimidazole  | Mouse             | Sensitising    |
| Nitric acid, calcium salt, tetrahydrate  | similar compounds | Not classified |
| Siloxanes and Silicones, di-Me, reaction products with silica  | Human and animal  | Not classified |
| 2-piperazin-1-ylethylamine   | Guinea pig        | Sensitising    |

**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  |
|--|----------|--|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine) | In Vitro | Not mutagenic  |
| 2,4,6-tris(dimethylaminomethyl)phenol  | In Vitro | Not mutagenic  |
| 2-Ethyl-4-methylimidazole  | In Vitro | Not mutagenic  |
| Nitric acid, calcium salt, tetrahydrate  | In Vitro | Not mutagenic  |
| Oxide glass chemicals  | 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  |
| 2-piperazin-1-ylethylamine   | In vivo  | Not mutagenic  |
| 2-piperazin-1-ylethylamine   | In Vitro | Some positive data exist, but the data are not sufficient for classification |

**Carcinogenicity**

| Name  | Route          | Species                 | Value  |
|---|----------------|-------------------------|--|
| Aluminium hydroxide   | Not specified. | Multiple animal species | Not carcinogenic   |
| Oxide glass chemicals   | Inhalation     | Multiple animal species | 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 |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

| Name   | Route     | Value                                  | Species | Test result           | Exposure Duration          |
|--|-----------|--|---------|-----------------------|----------------------------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine) | Ingestion | Not classified for female reproduction | Rat     | NOAEL 1,000 mg/kg/day | prematuring into lactation |
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine) | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 1,000 mg/kg/day | 29 days                    |
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine) | Ingestion | Not classified for development         | Rat     | NOAEL 1,000 mg/kg/day | prematuring into lactation |
| Aluminium hydroxide  | Ingestion | Not classified for development         | Rat     | NOAEL 768 mg/kg/day   | during organogenesis       |

|   |           |  |                   |                       |                              |
|---|-----------|--|-------------------|-----------------------|------------------------------|
| 2-Ethyl-4-methylimidazole                                     | Ingestion | Not classified for female reproduction | Rat               | NOAEL 150 mg/kg/day   | premating into lactation     |
| 2-Ethyl-4-methylimidazole                                     | Ingestion | Not classified for male reproduction   | Rat               | NOAEL 150 mg/kg/day   | 29 days                      |
| 2-Ethyl-4-methylimidazole                                     | Ingestion | Not classified for development         | Rat               | NOAEL 230 mg/kg/day   | during gestation             |
| 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     |
| 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         |
| 2-piperazin-1-ylethylamine                                    | Ingestion | Not classified for female reproduction | Rat               | NOAEL 598 mg/kg/day   | premating & during gestation |
| 2-piperazin-1-ylethylamine                                    | Ingestion | Not classified for male reproduction   | Rat               | NOAEL 409 mg/kg/day   | 32 days                      |
| 2-piperazin-1-ylethylamine                                    | Ingestion | Toxic to development                   | Rabbit            | NOAEL 75 mg/kg/day    | during gestation             |

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

| Name   | Route      | Target Organ(s)                   | Value  | Species                | Test result         | Exposure Duration      |
|--|------------|-----------------------------------|--|------------------------|---------------------|------------------------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | similar health hazards | Irritation Positive |                        |
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Rat                    | NOAEL Not available |                        |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL not available |                        |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)   | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification |                        | NOAEL Not available |                        |
| 2,4,6-tris(dimethylaminomethyl)phenol  | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification |                        | NOAEL Not available |                        |
| 2-Ethyl-4-methylimidazole  | 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-piperazin-1-ylethylamine   | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for                |                        | NOAEL Not available |                        |

|  |  |  |                |  |  |  |
|--|--|--|----------------|--|--|--|
|  |  |  | classification |  |  |  |
|--|--|--|----------------|--|--|--|

**Specific Target Organ Toxicity - repeated exposure**

| Name   | Route      | Target Organ(s)  | Value  | Species           | Test result                  | Exposure Duration     |
|--|------------|--|--|-------------------|------------------------------|-----------------------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine) | Ingestion  | heart   skin   endocrine system   gastrointestinal tract   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system | Not classified   | Rat               | NOAEL 1,000 mg/kg/day        | 29 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               |
| 2-Ethyl-4-methylimidazole  | Ingestion  | heart   hematopoietic system   liver   kidney and/or bladder   respiratory system   skin   endocrine system   gastrointestinal tract   bone, teeth, nails, and/or hair   immune system   muscles   nervous system   eyes   vascular system | Not classified   | Rat               | NOAEL 230 mg/kg/day          | 90 days               |
| Nitric acid, calcium salt, tetrahydrate  | Ingestion  | heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system                                    | Not classified   | similar compounds | NOAEL 1,500 mg/kg/day        | 28 days               |
| Oxide glass chemicals  | Inhalation | respiratory system   | Not classified   | Human             | NOAEL not available          | occupational exposure |
| Siloxanes and Silicones, di-Me, reaction products with silica                                | Inhalation | respiratory system   silicosis   | Not classified   | Human             | NOAEL Not available          | occupational exposure |
| 2-piperazin-1-ylethylamine   | Dermal     | skin   | Not classified   | Rat               | NOAEL 100 mg/kg/day          | 29 days               |
| 2-piperazin-1-ylethylamine   | Dermal     | hematopoietic system   nervous system   kidney and/or bladder  | Not classified   | Rat               | NOAEL 1,000 mg/kg/day        | 29 days               |
| 2-piperazin-1-ylethylamine   | Inhalation | respiratory system   | Causes damage to organs through prolonged or repeated exposure | Rat               | NOAEL 0.2 mg/m <sup>3</sup>  | 13 weeks              |
| 2-piperazin-1-ylethylamine   | Inhalation | hematopoietic system   eyes   kidney and/or bladder  | Not classified   | Rat               | NOAEL 53.8 mg/m <sup>3</sup> | 13 weeks              |
| 2-piperazin-1-ylethylamine   | Ingestion  | heart   endocrine  | Not classified   | Rat               | NOAEL 598                    | 28 days               |

|  |  |   |  |  |           |  |
|--|--|---|--|--|-----------|--|
|  |  | system  <br>hematopoietic<br>system   liver  <br>nervous system  <br>kidney and/or<br>bladder |  |  | mg/kg/day |  |
|--|--|---|--|--|-----------|--|

**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 |
|--|------------|------------------|---|----------|--------------------------------|-------------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | 68911-25-1 | Fathead minnow   | Experimental  | 96 hours | LL50                           | 2.16 mg/l   |
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | 68911-25-1 | Green algae      | Experimental  | 72 hours | EL50                           | 0.43 mg/l   |
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | 68911-25-1 | Water flea       | Experimental  | 48 hours | EL50                           | 0.57 mg/l   |
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | 68911-25-1 | Green algae      | Experimental  | 72 hours | NOEL                           | 0.28 mg/l   |
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | 68911-25-1 | Activated sludge | Experimental  | 3 hours  | EC50                           | 410.3 mg/l  |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated | 68683-29-4 |                  | Data not available or insufficient for classification |          |                                | N/A         |
| Aluminium hydroxide  | 21645-51-2 | Fish other       | Experimental  | 96 hours | No tox obs at lmt of water sol | >100 mg/l   |

**3M(tm) Scotch-Weld(tm) 7240 B/A FR : Part A**

|   |            |                  |   |            |                                |              |
|---|------------|------------------|---|------------|--------------------------------|--------------|
| Aluminium hydroxide   | 21645-51-2 | Green Algae      | Experimental  | 72 hours   | No tox obs at lmt of water sol | >100 mg/l    |
| Aluminium hydroxide   | 21645-51-2 | Water flea       | Experimental  | 48 hours   | No tox obs at lmt of water sol | >100 mg/l    |
| Aluminium hydroxide   | 21645-51-2 | Green Algae      | Experimental  | 72 hours   | No tox obs at lmt of water sol | 100 mg/l     |
| 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     |
| 2,4,6-tris(dimethylaminomethyl)phenol                         | 90-72-2    |                  | 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    |
| 2-Ethyl-4-methylimidazole                                     | 931-36-2   | Activated sludge | Experimental  | 30 minutes | EC50                           | >1,000 mg/l  |
| 2-Ethyl-4-methylimidazole                                     | 931-36-2   | Golden Orfe      | Experimental  | 96 hours   | LC50                           | 68.1 mg/l    |
| 2-Ethyl-4-methylimidazole                                     | 931-36-2   | Green algae      | Experimental  | 72 hours   | EC50                           | 124.8 mg/l   |
| 2-Ethyl-4-methylimidazole                                     | 931-36-2   | Water flea       | Experimental  | 48 hours   | EC50                           | 297.3 mg/l   |
| 2-Ethyl-4-methylimidazole                                     | 931-36-2   | Green algae      | Experimental  | 72 hours   | NOEC                           | 31.25 mg/l   |
| Nitric acid, calcium salt, tetrahydrate                       | 13477-34-4 | Guppy            | Estimated   | 96 hours   | LC50                           | 1,378 mg/l   |
| Nitric acid, calcium salt, tetrahydrate                       | 13477-34-4 | Fathead minnow   | Estimated   | 30 days    | NOEC                           | 58 mg/l      |
| Oxide glass chemicals   | 65997-17-3 | Green algae      | Experimental  | 72 hours   | EC50                           | >1,000 mg/l  |
| Oxide glass chemicals   | 65997-17-3 | Water flea       | Experimental  | 72 hours   | EC50                           | >1,000 mg/l  |
| Oxide glass chemicals   | 65997-17-3 | Zebra Fish       | Experimental  | 96 hours   | LC50                           | >1,000 mg/l  |
| Oxide glass chemicals   | 65997-17-3 | Green algae      | Experimental  | 72 hours   | NOEC                           | >=1,000 mg/l |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 |                  | Data not available or insufficient for classification |            |                                | N/A          |
| Bis[(dimethylamino)methyl]phenol                              | 71074-89-0 |                  | Data not available or insufficient for classification |            |                                | NA           |
| 2-piperazin-1-ylethylamine                                    | 140-31-8   | Bacteria         | Experimental  | 17 hours   | EC10                           | 100 mg/l     |

|                            |          |             |              |          |      |             |
|----------------------------|----------|-------------|--------------|----------|------|-------------|
| 2-piperazin-1-ylethylamine | 140-31-8 | Golden Orfe | Experimental | 96 hours | LC50 | 368 mg/l    |
| 2-piperazin-1-ylethylamine | 140-31-8 | Green Algae | Experimental | 72 hours | EC50 | >1,000 mg/l |
| 2-piperazin-1-ylethylamine | 140-31-8 | Water flea  | Experimental | 48 hours | EC50 | 58 mg/l     |
| 2-piperazin-1-ylethylamine | 140-31-8 | Green Algae | Experimental | 72 hours | NOEC | 31 mg/l     |

## 12.2. Persistence and degradability

| Material   | CAS Nbr    | Test type                         | Duration | Study Type                     | Test result                        | Protocol                            |
|--|------------|-----------------------------------|----------|--------------------------------|------------------------------------|-------------------------------------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)                           | 68911-25-1 | Experimental Biodegradation       | 28 days  | BOD                            | 0 % BOD/ThBOD                      | OECD 301F - Manometric respirometry |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated | 68683-29-4 | Data not available - insufficient |          |                                | N/A                                |                                     |
| Aluminium hydroxide  | 21645-51-2 | Data not available - insufficient |          |                                | N/A                                |                                     |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)   | 4246-51-9  | Estimated Photolysis              |          | Photolytic half-life (in air)  | 2.96 hours (t <sub>1/2</sub> )     | Non-standard method                 |
| 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   |
| 2,4,6-tris(dimethylaminomethyl)phenol  | 90-72-2    | Experimental Biodegradation       | 28 days  | BOD                            | 4 % BOD/ThBOD                      | OECD 301D - Closed bottle test      |
| 2-Ethyl-4-methylimidazole  | 931-36-2   | Experimental Biodegradation       | 28 days  | Dissolv. Organic Carbon Deplet | 86 %removal of DOC                 | OECD 301A - DOC Die Away Test       |
| Nitric acid, calcium salt, tetrahydrate  | 13477-34-4 | Data not available - insufficient |          |                                | N/A                                |                                     |
| Oxide glass chemicals  | 65997-17-3 | Data not available - insufficient |          |                                | N/A                                |                                     |
| Siloxanes and Silicones, di-Me, reaction products with silica  | 67762-90-7 | Data not available - insufficient |          |                                | N/A                                |                                     |
| Bis[(dimethylamino)methyl]phenol   | 71074-89-0 | Modeled Biodegradation            | 28 days  | BOD                            | 41 %CO2 evolution/THC O2 evolution | Catalogic™                          |
| 2-piperazin-1-ylethylamine   | 140-31-8   | Experimental Biodegradation       | 28 days  | BOD                            | 0 % BOD/ThBOD                      | OECD 301C - MITI test (I)           |

## 12.3 : Bioaccumulative potential

| Material   | Cas No.    | Test type   | Duration | Study Type             | Test result | Protocol   |
|--|------------|---|----------|------------------------|-------------|------------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine) | 68911-25-1 | Modeled Bioconcentration                              |          | Bioaccumulation factor | 42          | Catalogic™ |
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine) | 68911-25-1 | Modeled Bioconcentration                              |          | Log Kow                | 11.7        | Episuite™  |
| 2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-               | 68683-29-4 | Data not available or insufficient for classification | N/A      | N/A                    | N/A         | N/A        |



|   |            |   |     |         |       |                                |
|---|------------|---|-----|---------|-------|--------------------------------|
| piperaziny]ethyl]amino]butyl-terminated                       |            |   |     |         |       |                                |
| Aluminium hydroxide   | 21645-51-2 | Data not available or insufficient for classification | N/A | N/A     | N/A   | N/A                            |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)                      | 4246-51-9  | Experimental Bioconcentration                         |     | Log Kow | -1.25 | Non-standard method            |
| 2,4,6-tris(dimethylaminomethyl)phenol                         | 90-72-2    | Experimental Bioconcentration                         |     | Log Kow | -0.66 | 830.7550 Part.Coef Shake Flask |
| 2-Ethyl-4-methylimidazole                                     | 931-36-2   | Experimental Bioconcentration                         |     | Log Kow | 1.13  | Non-standard method            |
| Nitric acid, calcium salt, tetrahydrate                       | 13477-34-4 | Data not available or insufficient for classification | N/A | N/A     | N/A   | N/A                            |
| Oxide glass chemicals   | 65997-17-3 | 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                            |
| Bis(dimethylamino)methylphenol                                | 71074-89-0 | Modeled Bioconcentration                              |     | Log Kow | -2.34 | ACD/Labs ChemSketch™           |
| 2-piperazin-1-ylethylamine                                    | 140-31-8   | Experimental Bioconcentration                         |     | Log Kow | 0.3   | Non-standard method            |

**12.4. Mobility in soil**

| Material   | Cas No.    | Test type                  | Study Type | Test result  | Protocol             |
|--|------------|----------------------------|------------|--|----------------------|
| Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine) | 68911-25-1 | Modeled Mobility in Soil   | Koc        | 3 l/kg   |                      |
| 3,3'-Oxybis(ethyleneoxy)bis(propylamine)   | 4246-51-9  | Modeled Mobility in Soil   | Koc        | ERROR: Length cannot be greater than the length of the string. | ACD/Labs ChemSketch™ |
| 2-Ethyl-4-methylimidazole  | 931-36-2   | Estimated Mobility in Soil | Koc        | 90 l/kg  | Episuite™            |

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

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

**12.6. Endocrine disrupting properties**

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

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

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

Dispose of 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. 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

**SECTION 14: Transportation information**

IATA: UN3263; Corrosive Solid, Basic, Organic, N.O.S. (3,3'-Oxybis(Ethyleneoxy)Bis(Propylamine)); 8; II.  
IMDG: UN3263; Corrosive Solid, Basic, Organic, N.O.S. (3,3'-Oxybis(Ethyleneoxy)Bis(Propylamine)); 8; II; EMS: FA, SB.  
ADR: UN3263; Corrosive Solid, Basic, Organic, N.O.S (3,3'-Oxybis(Ethyleneoxy)Bis(Propylamine)); 8; II; (E); C8.

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.

**15.2. Chemical Safety Assessment**

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

**SECTION 16: Other information**

**List of relevant H statements**

|       |   |
|-------|---|
| H302  | Harmful if swallowed.   |
| H311  | Toxic in contact with skin.                                     |
| H314  | Causes severe skin burns and eye damage.                        |
| H315  | Causes skin irritation.   |
| H317  | May cause an allergic skin reaction.                            |
| H318  | Causes serious eye damage.                                      |
| H319  | Causes serious eye irritation.                                  |
| H336  | May cause drowsiness or dizziness.                              |
| H361d | Suspected of damaging the unborn child.                         |
| H372  | Causes damage to organs through prolonged or repeated exposure. |
| H400  | Very toxic to aquatic life.                                     |
| H410  | Very toxic to aquatic life with long lasting effects.           |
| H412  | Harmful to aquatic life with long lasting effects.              |

**Revision information:**

EU Section 09: pH information information was added.  
Formulation: Section 16: Annex information was modified.  
Industrial Use of Adhesives: Section 16: Annex information was modified.  
Professional Mixing and Application: Section 16: Annex information was modified.  
CLP: Ingredient table information was modified.  
Label: CLP Classification information was modified.  
Label: CLP Environmental Hazard Statements information was added.  
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.  
Label: CLP Precautionary - Response information was modified.  
Label: Graphic information was modified.  
Section 03: Composition table % Column heading information was added.  
Section 3: Composition/ Information of ingredients table information was modified.  
Section 03: Substance not applicable information was added.  
Section 04: First Aid - Symptoms and Effects (CLP) information was added.  
Section 04: Information on toxicological effects information was modified.  
Section 5: Hazardous combustion products table information was added.  
Section 6: Accidental release clean-up information information was modified.  
Section 6: Accidental release personal information information was modified.  
Section 7: Precautions safe handling information information was modified.  
Section 8: Occupational exposure limit table information was modified.  
Section 9: Evaporation Rate information information was deleted.  
Section 9: Explosive properties information information was deleted.  
Section 09: Kinematic Viscosity information information was added.  
Section 9: Melting point information information was modified.  
Section 9: Oxidising properties information information was deleted.  
Section 9: pH information information was deleted.  
Section 9: Property description for optional properties information was modified.  
Section 9: Vapour density value information was added.  
Section 9: Vapour density value information was deleted.  
Section 9: Viscosity information information was deleted.  
Section 10: Hazardous decomposition products during combustion text information was added.  
Section 11: Acute Toxicity table information was modified.  
Section 11: Carcinogenicity Table information was modified.  
Section 11: Classification disclaimer information was modified.  
Section 11: Germ Cell Mutagenicity Table information was modified.  
Section 11: No endocrine disruptor information available warning information was added.  
Section 11: Reproductive Toxicity Table information was modified.  
Section 11: Reproductive/developmental effects information 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 11: Target Organs - Single Table information was modified.  
Section 12: 12.6. Endocrine Disrupting Properties information was added.  
Section 12: 12.7. Other adverse effects information was modified.  
Section 12: Component ecotoxicity information information was modified.  
Section 12: Contact manufacturer for more detail. information was deleted.  
Section 12: Mobility in soil information information was added.  
Section 12: No endocrine disruptor information available warning information was added.  
Section 12: Persistence and Degradability information information was modified.  
Section 12: Bioaccumulative potential information information was modified.  
Section 14 Classification Code – Main Heading information was added.

Section 14 Classification Code – Regulation Data information was added.  
 Section 14 Control Temperature – Main Heading information was added.  
 Section 14 Control Temperature – Regulation Data information was added.  
 Section 14 Disclaimer Information information was added.  
 Section 14 Emergency Temperature – Main Heading information was added.  
 Section 14 Emergency Temperature – Regulation Data information was added.  
 Section 14 Hazard Class + Sub Risk – Main Heading information was added.  
 Section 14 Hazard Class + Sub Risk – Regulation Data information was added.  
 Section 14 Hazardous/Not Hazardous for Transportation information was added.  
 Section 14 Multiplier – Main Heading information was added.  
 Section 14 Multiplier – Regulation Data information was added.  
 Section 14 Other Dangerous Goods – Main Heading information was added.  
 Section 14 Other Dangerous Goods – Regulation Data information was added.  
 Section 14 Packing Group – Main Heading information was added.  
 Section 14 Packing Group – Regulation Data information was added.  
 Section 14 Proper Shipping Name information was added.  
 Section 14 Regulations – Main Headings information was added.  
 Section 14 Segregation – Regulation Data information was added.  
 Section 14 Segregation Code – Main Heading information was added.  
 Section 14 Special Precautions – Main Heading information was added.  
 Section 14 Special Precautions – Regulation Data information was added.  
 Section 14 Transport Category – Main Heading information was added.  
 Section 14 Transport Category – Regulation Data information was added.  
 Section 14 Transport in bulk – Regulation Data information was added.  
 Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.  
 Section 14 Transport Not Permitted – Main Heading information was added.  
 Section 14 Transport Not Permitted – Regulation Data information was added.  
 Section 14 Tunnel Code – Main Heading information was added.  
 Section 14 Tunnel Code – Regulation Data information was added.  
 Section 14 UN Number Column data information was added.  
 Section 14 UN Number information was added.  
 Section 14: Transportation classification information was modified.  
 Section 15: Carcinogenicity information information was deleted.  
 Section 15: Regulations - Inventories information was added.  
 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

| 1. Title   |   |
|--|---|
| <b>Substance identification</b>                        | 2,4,6-tris(dimethylaminomethyl)phenol;<br>EC No. 202-013-9;<br>CAS Nbr 90-72-2;   |
| <b>Exposure Scenario Name</b>                          | Formulation   |
| <b>Lifecycle Stage</b>                                 | Formulation or re-packing   |
| <b>Contributing activities</b>                         | PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities<br>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>         | Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs. Transfers with dedicated controls, including loading, filling, dumping, bagging.  |
| 2. Operational conditions and risk management measures |   |
| <b>Operating Conditions</b>                            | <b>Physical state:</b> Liquid.  |

|                                  |   |
|----------------------------------|---|
|                                  | <p><b>General operating conditions:</b><br/>Air exchange rate:: <math>\geq 3</math> times per hour;<br/>Indoor use;<br/>Partially open and partially closed process;<br/>Processing Temperature:: <math>\leq 40</math> degree Celsius;</p> <p><b>Task: PROC08b;</b><br/>Duration of exposure per day at workplace [for one worker]: 8 hours/day;</p> <p><b>Task: PROC09;</b><br/>Duration of exposure per day at workplace [for one worker]: <math>\leq 4</math> hour(s);</p> |
| <b>Risk management measures</b>  | <p>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/>Local exhaust ventilation;<br/>Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.;</p> <p><b>Environmental:</b><br/>None needed;</p>  |
| <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.  |

|   |   |
|---|---|
| <b>1. Title</b>   |   |
| <b>Substance identification</b>                               | 2,4,6-tris(dimethylaminomethyl)phenol;<br>EC No. 202-013-9;<br>CAS Nbr 90-72-2;   |
| <b>Exposure Scenario Name</b>                                 | Industrial Use of Adhesives   |
| <b>Lifecycle Stage</b>  | Use at industrial sites   |
| <b>Contributing activities</b>                                | PROC 05 -Mixing or blending in batch processes<br>PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities<br>PROC 10 -Roller application or brushing<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. Mixing operations (open systems). Transfers without dedicated controls, including loading, filling, dumping, bagging.  |
| <b>2. Operational conditions and risk management measures</b> |   |
| <b>Operating Conditions</b>                                   | <p><b>Physical state:</b>Liquid.<br/><b>General operating conditions:</b><br/>Air exchange rate:: <math>\geq 3</math> times per hour;<br/>Duration of exposure per day at workplace [for one worker]: <math>\leq 4</math> hour(s);<br/>Indoor use;<br/>Processing Temperature:: <math>\leq 40</math> degree Celsius;</p> <p><b>Task: PROC05;</b><br/>Duration of exposure per day at workplace [for one worker]: 8 hours/day;</p> |
| <b>Risk management measures</b>                               | <p>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/>Local exhaust ventilation;<br/>Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.;</p>  |

|                                  |  |
|----------------------------------|--|
|                                  | <b>Environmental:</b><br>None needed;  |
| <b>Waste management measures</b> | Do not release to waterways or sewers;   |
| <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>                               | 2,4,6-tris(dimethylaminomethyl)phenol;<br>EC No. 202-013-9;<br>CAS Nbr 90-72-2;  |
| <b>Exposure Scenario Name</b>                                 | Hand-mixing of preparations, e.g. plasters, resins, two-component adhesives.   |
| <b>Lifecycle Stage</b>  | Widespread use by professional workers   |
| <b>Contributing activities</b>                                | PROC 10 -Roller application or brushing<br>ERC 08c -Widespread use leading to inclusion into/onto article (indoor)   |
| <b>Processes, tasks and activities covered</b>                | Application of product.  |
| <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 exposure per day at workplace [for one worker]: 8 hours/day;<br>Indoor use;<br>Processing Temperature:: <= 40 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>Local exhaust ventilation;<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 release directly to waterways;  |
| <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 United Kingdom MSDSs are available at [www.3M.com/uk](http://www.3M.com/uk)



## Safety Data Sheet

Copyright,2021, 3M Company All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

|                        |            |                         |            |
|------------------------|------------|-------------------------|------------|
| <b>Document group:</b> | 32-5808-4  | <b>Version number:</b>  | 6.04       |
| <b>Revision date:</b>  | 11/05/2021 | <b>Supersedes date:</b> | 16/07/2020 |

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

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

#### 1.1. Product identifier

3M™ Scotch-Weld™ 7240 B/A FR- 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 United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.  
**Telephone:** +44 (0)1344 858 000  
**E Mail:** tox.uk@mmm.com  
**Website:** www.3M.com/uk

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

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

##### CLASSIFICATION:

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

For full text of H phrases, see Section 16.

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

WARNING.

**Symbols**

GHS07 (Exclamation mark) |GHS09 (Environment) |

**Pictograms****Ingredients:**

| Ingredient   | CAS Nbr    | EC No.    | % by Wt |
|--|------------|-----------|---------|
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane   | 14228-73-0 | 238-098-4 | < 30    |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane  | 1675-54-3  | 216-823-5 | 10 - 30 |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | 9003-36-5  | 500-006-8 | 10 - 30 |
| STANNOUS SULFATE   | 7488-55-3  | 231-302-2 | < 1     |

**HAZARD STATEMENTS:**

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

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

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

**Response:**

|                    |  |
|--------------------|--|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P333 + P313        | If skin irritation or rash occurs: Get medical advice/attention.   |
| P391               | Collect spillage.  |

15% of the mixture consists of components of unknown acute oral toxicity.

Contains 16% of components with unknown hazards to the aquatic environment.

**2.3. Other hazards**

None known.

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



**3.1. Substances**

Not applicable

**3.2. Mixtures**

| <b>Ingredient</b>  | <b>Identifier(s)</b>   | <b>%</b> | <b>Classification according to Regulation (EC) No. 1272/2008 [CLP]</b>   |
|--|--|----------|--|
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane   | (CAS-No.) 14228-73-0<br>(EC-No.) 238-098-4                                 | < 30     | Aquatic Chronic 3, H412<br>Acute Tox. 4, H302<br>Skin Irrit. 2, H315<br>Skin Sens. 1B, H317  |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane  | (CAS-No.) 1675-54-3<br>(EC-No.) 216-823-5<br>(REACH-No.) 01-2119456619-26  | 10 - 30  | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411   |
| Aluminium hydroxide  | (CAS-No.) 21645-51-2<br>(EC-No.) 244-492-7<br>(REACH-No.) 01-2119529246-39 | 10 - 30  | Substance with a national occupational exposure limit  |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | (CAS-No.) 9003-36-5<br>(EC-No.) 500-006-8<br>(REACH-No.) 01-2119454392-40  | 10 - 30  | Skin Irrit. 2, H315<br>Skin Sens. 1A, H317<br>Aquatic Chronic 2, H411  |
| Oxide glass chemicals  | (CAS-No.) 65997-17-3<br>(EC-No.) 266-046-0                                 | < 20     | Substance with a national occupational exposure limit  |
| Acrylic copolymer  | Trade Secret   | < 10     | Substance not classified as hazardous  |
| OXIDE GLASS CHEMICALS (non-fibrous)  | (CAS-No.) 65997-17-3<br>(EC-No.) 266-046-0                                 | 3 - 7    | Substance with a national occupational exposure limit  |
| Silicon dioxide  | (CAS-No.) 7631-86-9<br>(EC-No.) 231-545-4<br>(REACH-No.) 01-2119379499-16  | < 5      | Substance with a national occupational exposure limit  |
| red phosphorus   | (CAS-No.) 7723-14-0<br>(EC-No.) 918-594-3<br>(REACH-No.) 01-2119489913-23  | < 3      | Flam. Sol. 1, H228<br>Aquatic Chronic 3, H412  |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane   | (CAS-No.) 2530-83-8<br>(EC-No.) 219-784-2<br>(REACH-No.) 01-2119513212-58  | < 3      | Eye Dam. 1, H318   |
| Siloxanes and Silicones, di-Me, reaction products with silica                        | (CAS-No.) 67762-90-7   | < 3      | Substance with a national occupational exposure limit  |
| STANNOUS SULFATE   | (CAS-No.) 7488-55-3<br>(EC-No.) 231-302-2                                  | < 1      | Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317<br>STOT SE 3, H335<br>Aquatic Acute 1, H400,M=1<br>Aquatic Chronic 1, H410,M=1 |

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance.

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

**Specific Concentration Limits**

| Ingredient                                   | Identifier(s)   | Specific Concentration Limits                                 |
|--|---|---|
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | (CAS-No.) 2530-83-8<br>(EC-No.) 219-784-2<br>(REACH-No.) 01-2119513212-58 | (C >= 5%) Eye Dam. 1, H318                                    |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane      | (CAS-No.) 1675-54-3<br>(EC-No.) 216-823-5                                 | (C >= 5%) Skin Irrit. 2, H315<br>(C >= 5%) Eye Irrit. 2, H319 |

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

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

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

**Skin contact**

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

**Eye contact**

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

**If swallowed**

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

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

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

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

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Extinguishing media**

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

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

None inherent in this product.

**Hazardous Decomposition or By-Products****Substance**

Aldehydes.  
Carbon monoxide  
Carbon dioxide.  
Hydrogen Chloride

**Condition**

During combustion.  
During combustion.  
During combustion.  
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. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

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

Collect as much of the spilled material as possible. Use wet sweeping compound or water to avoid dusting. Sweep up. 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. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

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

Keep container tightly closed. Store in a well-ventilated place. Store away from heat. Store away from acids. Store away from strong bases.

**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.

| <b>Ingredient</b>       | <b>CAS Nbr</b> | <b>Agency</b>           | <b>Limit type</b>  | <b>Additional comments</b> |
|-------------------------|----------------|-------------------------|--|----------------------------|
| DUST, INERT OR NUISANCE | 21645-51-2     | UK HSC                  | TWA(as respirable dust):4 mg/m <sup>3</sup> ;TWA(as inhalable dust):10 mg/m <sup>3</sup> |                            |
| Glass, oxide, chemicals | 65997-17-3     | UK HSC                  | TWA(as fiber):5 mg/m <sup>3</sup> (1 fibers/ml)  |                            |
| Oxide glass chemicals   | 65997-17-3     | Manufacturer determined | TWA(as non-fibrous, respirable)(8 hours):3 mg/m <sup>3</sup> ;TWA(as non-fibrous,        |                            |

|  |            |        |   |
|--|------------|--------|---|
| Silicon dioxide                                      | 67762-90-7 | UK HSC | inhalable fraction)(8 hours):10<br>mg/m <sup>3</sup><br>TWA(as respirable dust):2.4<br>mg/m <sup>3</sup> ;TWA(as inhalable<br>dust):6 mg/m <sup>3</sup> |
| TIN, INORGANIC<br>COMPOUNDS, EXCEPT SnH <sub>4</sub> | 7488-55-3  | UK HSC | TWA(as Sn):2<br>mg/m <sup>3</sup> ;STEL(as Sn):4 mg/m <sup>3</sup>  |
| Silicon dioxide                                      | 7631-86-9  | UK HSC | TWA(as respirable dust):2.4<br>mg/m <sup>3</sup> ;TWA(as inhalable<br>dust):6 mg/m <sup>3</sup>   |
| red phosphorus                                       | 7723-14-0  | UK HSC | TWA: 0.1 mg/m <sup>3</sup> ; STEL: 0.3<br>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 UK HSC

## 8.2. Exposure controls

### 8.2.1. Engineering controls

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

### 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:

| <b>Material</b>  | <b>Thickness (mm)</b> | <b>Breakthrough Time</b> |
|------------------|-----------------------|--------------------------|
| 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

|  |  |
|--|--|
| Physical state                         | Solid.   |
| Specific Physical Form:                | Thixotropic paste                                |
| Colour                                 | Black  |
| Odor                                   | Mild Epoxy                                       |
| Odour threshold                        | <i>No data available.</i>                        |
| Melting point/freezing point           | <i>No data available.</i>                        |
| Boiling point/boiling range            | <i>Not applicable.</i>                           |
| Flammability (solid, gas)              | Not classified                                   |
| Flammable Limits(LEL)                  | <i>Not applicable.</i>                           |
| Flammable Limits(UEL)                  | <i>Not applicable.</i>                           |
| Flash point                            | $\geq 100$ °C [ <i>Test Method: Closed Cup</i> ] |
| Autoignition temperature               | <i>Not applicable.</i>                           |
| Decomposition temperature              | <i>No data available.</i>                        |
| pH                                     |  |
| Kinematic Viscosity                    | 67.30769 - 181.818181 mm <sup>2</sup> /sec       |
| Water solubility                       | <i>No data available.</i>                        |
| Solubility- non-water                  | <i>No data available.</i>                        |
| Partition coefficient: n-octanol/water | <i>No data available.</i>                        |
| Vapour pressure                        | <i>Not applicable.</i>                           |
| Density                                | 1.04 - 1.1 g/cm <sup>3</sup>                     |
| Relative density                       | 1.04 - 1.1 [ <i>Ref Std: WATER=1</i> ]           |
| Relative Vapor Density                 | <i>Not applicable.</i>                           |

### 9.2. Other information

#### 9.2.2 Other safety characteristics

|                               |                           |
|-------------------------------|---------------------------|
| EU Volatile Organic Compounds | <i>No data available.</i> |
| Evaporation rate              | <i>Not applicable.</i>    |
| 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.

Strong bases.

### 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

May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, nose and throat pain.

#### Skin contact

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

#### Eye contact

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  | Inhalation-Dust/Mist(4 hr)     |                        | No data available; calculated ATE5 - 12.5 mg/l |
| Overall product  | Ingestion                      |                        | No data available; calculated ATE >5,000 mg/kg |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane  | Dermal                         | Rat                    | LD50 > 1,600 mg/kg                             |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane  | Ingestion                      | Rat                    | LD50 > 1,000 mg/kg                             |
| Aluminium hydroxide  | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg             |
| Aluminium hydroxide  | Ingestion                      | Rat                    | LD50 > 5,000 mg/kg                             |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Dermal                         | Rabbit                 | LD50 > 2,000 mg/kg                             |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 1.7 mg/l                                |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Ingestion                      | Rat                    | LD50 > 5,000 mg/kg                             |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane   | Dermal                         | Rabbit                 | LD50 > 2,000 mg/kg                             |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane   | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 5.19 mg/l                               |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane   | Ingestion                      | Rat                    | LD50 1,098 mg/kg                               |
| Oxide glass chemicals  | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg             |
| Oxide glass chemicals  | Ingestion                      |                        | LD50 estimated to be 2,000 - 5,000 mg/kg       |
| OXIDE GLASS CHEMICALS (non-fibrous)  | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg             |
| OXIDE GLASS CHEMICALS (non-fibrous)  | Ingestion                      |                        | LD50 estimated to be 2,000 - 5,000 mg/kg       |
| red phosphorus   | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg             |
| red phosphorus   | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 1.1 mg/l                                  |
| red phosphorus   | Ingestion                      | Rat                    | LD50 > 15,000 mg/kg                            |
| Silicon dioxide  | Dermal                         | Rabbit                 | LD50 > 5,000 mg/kg                             |
| Silicon dioxide  | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 0.691 mg/l                              |
| Silicon dioxide  | Ingestion                      | Rat                    | LD50 > 5,110 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                               |
| STANNOUS SULFATE   | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 2 mg/l                                    |
| STANNOUS SULFATE   | Ingestion                      | Rat                    | LD50 2,207 mg/kg                               |
| STANNOUS SULFATE   | Dermal                         | similar health hazards | LD50 estimated to be 2,000 - 5,000 mg/kg       |

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

| Name   | Species | Value                     |
|--|---------|---------------------------|
| bis-[4-(2,3-epoxypropoxy)phenyl]propane  | Rabbit  | Mild irritant             |
| Aluminium hydroxide  | Rabbit  | No significant irritation |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Rabbit  | Mild irritant             |

|   |                        |                           |
|---|------------------------|---------------------------|
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane                  | In vitro data          | Irritant                  |
| Oxide glass chemicals   | Professional judgement | No significant irritation |
| OXIDE GLASS CHEMICALS (non-fibrous)                           | Professional judgement | No significant irritation |
| Silicon dioxide   | Rabbit                 | No significant irritation |
| Siloxanes and Silicones, di-Me, reaction products with silica | Rabbit                 | No significant irritation |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane                  | Rabbit                 | Mild irritant             |
| STANNOUS SULFATE  | Professional judgement | Irritant                  |

### Serious Eye Damage/Irritation

| Name   | Species                | Value                     |
|--|------------------------|---------------------------|
| bis-[4-(2,3-epoxypropoxy)phenyl]propane  | Rabbit                 | Moderate irritant         |
| Aluminium hydroxide  | Rabbit                 | No significant irritation |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Rabbit                 | No significant irritation |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane   | In vitro data          | No significant irritation |
| Oxide glass chemicals  | Professional judgement | No significant irritation |
| OXIDE GLASS CHEMICALS (non-fibrous)  | Professional judgement | No significant irritation |
| Silicon dioxide  | Rabbit                 | No significant irritation |
| Siloxanes and Silicones, di-Me, reaction products with silica                        | Rabbit                 | No significant irritation |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane   | Rabbit                 | Corrosive                 |
| STANNOUS SULFATE   | Professional judgement | Corrosive                 |

### Skin Sensitisation

| Name   | Species                 | Value          |
|--|-------------------------|----------------|
| bis-[4-(2,3-epoxypropoxy)phenyl]propane  | Human and animal        | Sensitising    |
| Aluminium hydroxide  | Guinea pig              | Not classified |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | Multiple animal species | Sensitising    |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane   | Mouse                   | Sensitising    |
| Silicon dioxide  | Human and animal        | Not classified |
| Siloxanes and Silicones, di-Me, reaction products with silica                        | Human and animal        | Not classified |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane   | Guinea pig              | Not classified |
| STANNOUS SULFATE   | Human                   | Sensitising    |



**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 |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane                  | In vivo  | Not mutagenic  |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane                  | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Oxide glass chemicals   | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Silicon dioxide   | In Vitro | Not mutagenic  |
| 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 |
| STANNOUS SULFATE  | 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 |
| Aluminium hydroxide   | Not specified. | Multiple animal species | Not carcinogenic   |
| Oxide glass chemicals   | Inhalation     | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| Silicon dioxide   | Not specified. | 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               |
| Aluminium hydroxide                          | Ingestion | Not classified for development         | Rat     | NOAEL 768 mg/kg/day | during organogenesis       |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | Ingestion | Not classified for female reproduction | Rat     | NOAEL 300 mg/kg/day | prematuring into lactation |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 300 mg/kg/day | 33 days                    |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | Ingestion | Not classified for development         | Rat     | NOAEL 300 mg/kg/day | prematuring into lactation |
| Silicon dioxide                              | Ingestion | Not classified for female reproduction | Rat     | NOAEL 509 mg/kg/day | 1 generation               |
| Silicon dioxide                              | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 497           | 1 generation               |

|   |           |  |     | mg/kg/day                   |                         |
|---|-----------|--|-----|-----------------------------|-------------------------|
| Silicon dioxide   | Ingestion | Not classified for development         | Rat | NOAEL<br>1,350<br>mg/kg/day | during<br>organogenesis |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not classified for female reproduction | Rat | NOAEL 509<br>mg/kg/day      | 1 generation            |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not classified for male reproduction   | Rat | NOAEL 497<br>mg/kg/day      | 1 generation            |
| Siloxanes and Silicones, di-Me, reaction products with silica | Ingestion | Not classified for development         | Rat | NOAEL<br>1,350<br>mg/kg/day | during<br>organogenesis |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane                  | Ingestion | Not classified for female reproduction | Rat | NOAEL<br>1,000<br>mg/kg/day | 1 generation            |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane                  | Ingestion | Not classified for male reproduction   | Rat | NOAEL<br>1,000<br>mg/kg/day | 1 generation            |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane                  | Ingestion | Not classified for development         | Rat | NOAEL<br>3,000<br>mg/kg/day | during<br>organogenesis |

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

| Name   | Route      | Target Organ(s)        | Value  | Species                | Test result         | Exposure Duration |
|--|------------|------------------------|--|------------------------|---------------------|-------------------|
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available |                   |
| STANNOUS SULFATE                             | Inhalation | respiratory irritation | May cause respiratory irritation   | Professional judgement | NOAEL Not available |                   |

#### Specific Target Organ Toxicity - repeated exposure

| Name  | Route      | Target Organ(s)   | Value          | Species | Test result                 | Exposure Duration     |
|---|------------|---|----------------|---------|-----------------------------|-----------------------|
| bis-[4-(2,3-epoxypropoxy)phenyl]propane                       | Dermal     | liver   | Not classified | Rat     | NOAEL<br>1,000<br>mg/kg/day | 2 years               |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane                       | Dermal     | nervous system  | Not classified | Rat     | NOAEL<br>1,000<br>mg/kg/day | 13 weeks              |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane                       | Ingestion  | auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder                                  | Not classified | Rat     | NOAEL<br>1,000<br>mg/kg/day | 28 days               |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane                  | Ingestion  | endocrine system   gastrointestinal tract   liver   heart   hematopoietic system   immune system   nervous system   kidney and/or bladder | Not classified | Rat     | NOAEL 300<br>mg/kg/day      | 33 days               |
| Oxide glass chemicals   | Inhalation | respiratory system  | Not classified | Human   | NOAEL not available         | occupational exposure |
| Silicon dioxide   | Inhalation | respiratory system   silicosis  | Not classified | Human   | NOAEL Not available         | occupational exposure |
| 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,   | Not classified | Rat     | NOAEL<br>1,000              | 28 days               |

|                  |           |   |                |     |                    |         |
|------------------|-----------|---|----------------|-----|--------------------|---------|
| ethoxysilane     |           | nails, and/or hair   hematopoietic system   liver   immune system   nervous system   kidney and/or bladder   respiratory system |                |     | mg/kg/day          |         |
| STANNOUS SULFATE | Ingestion | hematopoietic system   liver   heart   kidney and/or bladder  | Not classified | Rat | NOAEL 40 mg/kg/day | 4 weeks |

### 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 |
|--|------------|---------------|--------------|----------|--------------------------------|-------------|
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | 14228-73-0 | Bacteria      | Estimated    | 18 hours | EC50                           | 10,264 mg/l |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | 14228-73-0 | Green algae   | Estimated    | 72 hours | EC50                           | 26.7 mg/l   |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | 14228-73-0 | Rainbow trout | Estimated    | 96 hours | LC50                           | 10.1 mg/l   |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | 14228-73-0 | Water flea    | Estimated    | 48 hours | EC50                           | 16.3 mg/l   |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | 14228-73-0 | Green algae   | Estimated    | 72 hours | EC10                           | 21.4 mg/l   |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | 14228-73-0 | Water flea    | Estimated    | 21 days  | NOEC                           | 11.7 mg/l   |
| Aluminium hydroxide                          | 21645-51-2 | Fish other    | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l   |
| Aluminium hydroxide                          | 21645-51-2 | Green Algae   | Experimental | 72 hours | No tox obs at lmt of water sol | >100 mg/l   |
| Aluminium hydroxide                          | 21645-51-2 | Water flea    | Experimental | 48 hours | No tox obs at lmt of water sol | >100 mg/l   |
| Aluminium hydroxide                          | 21645-51-2 | Green Algae   | Experimental | 72 hours | No tox obs at lmt of water sol | 100 mg/l    |

**3M™ Scotch-Weld™ 7240 B/A FR- Part B**

|  |            |                  |   |          |      |              |
|--|------------|------------------|---|----------|------|--------------|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane  | 1675-54-3  | Activated sludge | Estimated   | 3 hours  | IC50 | >100 mg/l    |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane  | 1675-54-3  | Rainbow trout    | Estimated   | 96 hours | LC50 | 2 mg/l       |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane  | 1675-54-3  | Water flea       | Estimated   | 48 hours | EC50 | 1.8 mg/l     |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane  | 1675-54-3  | Green Algae      | Experimental  | 72 hours | EC50 | >11 mg/l     |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane  | 1675-54-3  | Green Algae      | Experimental  | 72 hours | NOEC | 4.2 mg/l     |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane  | 1675-54-3  | Water flea       | Experimental  | 21 days  | NOEC | 0.3 mg/l     |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | 9003-36-5  | Green Algae      | Experimental  | 72 hours | EC50 | 1.8 mg/l     |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | 9003-36-5  | Activated sludge | Unknown   | 3        | IC50 | >100 mg/l    |
| Oxide glass chemicals  | 65997-17-3 | Green algae      | Experimental  | 72 hours | EC50 | >1,000 mg/l  |
| Oxide glass chemicals  | 65997-17-3 | Water flea       | Experimental  | 72 hours | EC50 | >1,000 mg/l  |
| Oxide glass chemicals  | 65997-17-3 | Zebra Fish       | Experimental  | 96 hours | LC50 | >1,000 mg/l  |
| Oxide glass chemicals  | 65997-17-3 | Green algae      | Experimental  | 72 hours | NOEC | >=1,000 mg/l |
| OXIDE GLASS CHEMICALS (non-fibrous)  | 65997-17-3 | Green algae      | Experimental  | 72 hours | EC50 | >1,000 mg/l  |
| OXIDE GLASS CHEMICALS (non-fibrous)  | 65997-17-3 | Water flea       | Experimental  | 72 hours | EC50 | >1,000 mg/l  |
| OXIDE GLASS CHEMICALS (non-fibrous)  | 65997-17-3 | Zebra Fish       | Experimental  | 96 hours | LC50 | >1,000 mg/l  |
| OXIDE GLASS CHEMICALS (non-fibrous)  | 65997-17-3 | Green algae      | Experimental  | 72 hours | NOEC | >1,000 mg/l  |
| Silicon dioxide  | 7631-86-9  |                  | Data not available or insufficient for classification |          |      | N/A          |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane   | 2530-83-8  | Bacteria         | Experimental  | 5 hours  | EC10 | 1,520 mg/l   |
| [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   |

|   |            |                  |   |           |      |             |
|---|------------|------------------|---|-----------|------|-------------|
| imethoxysilane  |            |                  |   |           |      |             |
| red phosphorus  | 7723-14-0  | Activated sludge | Estimated   | 3 hours   | NOEC | 1,000 mg/l  |
| red phosphorus  | 7723-14-0  | Activated sludge | Experimental  | 3 hours   | EC50 | >1,000 mg/l |
| red phosphorus  | 7723-14-0  | Green algae      | Experimental  | 72 hours  | EL50 | 18.3 mg/l   |
| red phosphorus  | 7723-14-0  | Water flea       | Experimental  | 48 hours  | EL50 | 10.5 mg/l   |
| red phosphorus  | 7723-14-0  | Zebra Fish       | Experimental  | 96 hours  | EL50 | 2.5 mg/l    |
| red phosphorus  | 7723-14-0  | Green algae      | Experimental  | 72 hours  | EL10 | 6.6 mg/l    |
| Siloxanes and Silicones, di-Me, reaction products with silica | 67762-90-7 |                  | Data not available or insufficient for classification |           |      | N/A         |
| STANNOUS SULFATE  | 7488-55-3  | Activated sludge | Experimental  | 3 hours   | EC50 | 1,194 mg/l  |
| STANNOUS SULFATE  | 7488-55-3  | Diatom           | Laboratory  | 72 hours  | EC50 | 0.2 mg/l    |
| STANNOUS SULFATE  | 7488-55-3  | Water flea       | Laboratory  | 48 hours  | EC50 | 39.08 mg/l  |
| STANNOUS SULFATE  | 7488-55-3  | Zebra Fish       | Laboratory  | 120 hours | NOEC | 9.48 mg/l   |

**12.2. Persistence and degradability**

| Material   | CAS Nbr    | Test type                     | Duration | Study Type                     | Test result                        | Protocol                            |
|--|------------|-------------------------------|----------|--------------------------------|------------------------------------|-------------------------------------|
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane   | 14228-73-0 | Estimated Biodegradation      | 28 days  | Dissolv. Organic Carbon Deplet | 16.6 %removal of DOC               | OECD 301F - Manometric respirometry |
| Aluminium hydroxide  | 21645-51-2 | Data not availbl-insufficient |          |                                | N/A                                |                                     |
| bis-[4-(2,3-epoxypropoxi)phenyl]propane  | 1675-54-3  | Experimental Hydrolysis       |          | Hydrolytic half-life           | 117 hours (t 1/2)                  | Non-standard method                 |
| bis-[4-(2,3-epoxypropoxi)phenyl]propane  | 1675-54-3  | Experimental Biodegradation   | 28 days  | BOD                            | 5 %BOD/COD                         | OECD 301F - Manometric respirometry |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | 9003-36-5  | Experimental Biodegradation   | 28 days  | CO2 evolution                  | 16 %CO2 evolution/THC O2 evolution | OECD 301B - Modified sturm or CO2   |
| Oxide glass chemicals  | 65997-17-3 | Data not availbl-insufficient |          |                                | N/A                                |                                     |
| OXIDE GLASS CHEMICALS (non-fibrous)  | 65997-17-3 | Data not availbl-insufficient |          |                                | N/A                                |                                     |
| Silicon dioxide  | 7631-86-9  | Data not availbl-insufficient |          |                                | N/A                                |                                     |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane   | 2530-83-8  | Experimental Hydrolysis       |          | Hydrolytic half-life           | 6.5 hours (t 1/2)                  | Non-standard method                 |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane   | 2530-83-8  | Experimental Biodegradation   | 28 days  | Dissolv. Organic Carbon Deplet | 37 % weight                        | Non-standard method                 |
| red phosphorus   | 7723-14-0  | Experimental Hydrolysis       |          | Hydrolytic half-life           | 8.3 years (t 1/2)                  | Non-standard method                 |
| Siloxanes and Silicones, di-Me, reaction products with silica                        | 67762-90-7 | Data not availbl-insufficient |          |                                | N/A                                |                                     |
| STANNOUS SULFATE   | 7488-55-3  | Data not availbl-insufficient |          |                                | N/A                                |                                     |

**12.3 : Bioaccumulative potential**

| Material   | Cas No.    | Test type   | Duration | Study Type             | Test result | Protocol                           |
|--|------------|---|----------|------------------------|-------------|------------------------------------|
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane   | 14228-73-0 | Estimated Bioconcentration                            |          | Bioaccumulation factor | 3           | Estimated: Bioconcentration factor |
| Aluminium hydroxide  | 21645-51-2 | Data not available or insufficient for classification | N/A      | N/A                    | N/A         | N/A                                |
| bis-[4-(2,3-epoxypropoxy)phenyl]propane  | 1675-54-3  | Experimental Bioconcentration                         |          | Log Kow                | 3.242       | Non-standard method                |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | 9003-36-5  | Experimental Bioconcentration                         |          | Log Kow                | ≤3.6        | OECD 117 log Kow HPLC method       |
| Oxide glass chemicals  | 65997-17-3 | Data not available or insufficient for classification | N/A      | N/A                    | N/A         | N/A                                |
| OXIDE GLASS CHEMICALS (non-fibrous)  | 65997-17-3 | Data not available or insufficient for classification | N/A      | N/A                    | N/A         | N/A                                |
| Silicon dioxide  | 7631-86-9  | 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                                |
| red phosphorus   | 7723-14-0  | 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                                |
| STANNOUS SULFATE   | 7488-55-3  | Estimated BCF - Other                                 | 1 days   | Bioaccumulation factor | 3000        | Non-standard method                |

#### 12.4. Mobility in soil

| Material   | Cas No.    | Test type                     | Study Type | Test result | Protocol                       |
|--|------------|-------------------------------|------------|-------------|--------------------------------|
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane   | 14228-73-0 | Estimated Mobility in Soil    | Koc        | 57 l/kg     | Episuite™                      |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol | 9003-36-5  | Experimental Mobility in Soil | Koc        | 4,460 l/kg  | OECD 121 Estim. of Koc by HPLC |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane   | 2530-83-8  | Estimated Mobility in Soil    | Koc        | 58 l/kg     | Episuite™                      |

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

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

#### 12.6. Endocrine disrupting properties

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

#### 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**

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

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

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

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

08 04 09\* Waste adhesives and sealants containing organic solvents or other dangerous substances

**SECTION 14: Transportation information**

IMDG: UN3077; Environmentally Hazardous Substance, Solid, N.O.S (Solid Epoxy Resin); 9; III; Marine Pollutant: Solid Epoxy Resin; EMS: FA, SF.

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

ADR: UN3077; Environmentally Hazardous Substance, Solid, N.O.S (Solid Epoxy Resin); 9; III; (-); M7.

IATA: UN3077; Environmentally Hazardous Substance, Solid, N.O.S (Solid Epoxy Resin); 9; III.

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

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Carcinogenicity**

| <u>Ingredient</u>                       | <u>CAS Nbr</u> | <u>Classification</u>   | <u>Regulation</u>                           |
|---|----------------|-------------------------|---|
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | 1675-54-3      | Gr. 3: Not classifiable | International Agency for Research on Cancer |
| Silicon dioxide                         | 7631-86-9      | Gr. 3: Not classifiable | International Agency for Research on Cancer |

**Global inventory status**

Contact 3M for more information.

**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**

|      |   |
|------|---|
| H228 | Flammable solid.                                      |
| H302 | Harmful if swallowed.                                 |
| H315 | Causes skin irritation.                               |
| H317 | May cause an allergic skin reaction.                  |
| H318 | Causes serious eye damage.                            |
| H319 | Causes serious eye irritation.                        |
| H332 | Harmful if inhaled.                                   |
| H335 | May cause respiratory irritation.                     |
| H400 | Very toxic to aquatic life.                           |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects.      |
| H412 | Harmful to aquatic life with long lasting effects.    |

**Revision information:**

EU Section 09: pH information information was added.  
Label: CLP Classification information was modified.  
Label: CLP Precautionary - Disposal information was deleted.  
Label: CLP Precautionary - Prevention information was modified.  
Label: CLP Precautionary - Response information was modified.  
Section 03: Composition table % Column heading information was added.  
Section 3: Composition/ Information of ingredients table information was modified.  
Section 03: SCL table information was added.  
Section 03: Substance not applicable information was added.  
Section 04: Information on toxicological effects information was modified.  
Section 8: Occupational exposure limit table information was modified.  
Section 9: Density information information was modified.  
Section 9: Evaporation Rate information information was deleted.  
Section 9: Explosive properties information information was deleted.  
Section 09: Kinematic Viscosity information information was added.  
Section 9: Melting point information information was modified.  
Section 9: Oxidising properties information information was deleted.  
Section 9: pH information information was deleted.  
Section 9: Property description for optional properties information was modified.  
Section 9: Vapour density value information was added.  
Section 9: Vapour density value information was deleted.  
Section 9: Viscosity information information was deleted.  
Section 11: Acute Toxicity table information was modified.  
Section 11: Carcinogenicity Table information was modified.  
Section 11: Classification disclaimer information was modified.  
Section 11: Germ Cell Mutagenicity Table information was modified.  
Section 11: No endocrine disruptor information available warning information was added.  
Section 11: Reproductive Toxicity 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: Target Organs - Repeated Table information was modified.  
Section 12: 12.6. Endocrine Disrupting Properties information was added.  
Section 12: 12.7. Other adverse effects information was modified.  
Section 12: Component ecotoxicity information information was modified.  
Section 12: Contact manufacturer for more detail. information was deleted.  
Section 12: Mobility in soil information information was added.  
Section 12: No endocrine disruptor information available warning information was added.  
Section 12: Persistence and Degradability information information was modified.



Section 12: Bioaccumulative potential information was modified.  
Section 14 Classification Code – Main Heading information was added.  
Section 14 Classification Code – Regulation Data information was added.  
Section 14 Control Temperature – Main Heading information was added.  
Section 14 Control Temperature – Regulation Data information was added.  
Section 14 Disclaimer Information information was added.  
Section 14 Emergency Temperature – Main Heading information was added.  
Section 14 Emergency Temperature – Regulation Data information was added.  
Section 14 Hazard Class + Sub Risk – Main Heading information was added.  
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.  
Section 14 Hazardous/Not Hazardous for Transportation information was added.  
Section 14 Multiplier – Main Heading information was added.  
Section 14 Multiplier – Regulation Data information was added.  
Section 14 Other Dangerous Goods – Main Heading information was added.  
Section 14 Other Dangerous Goods – Regulation Data information was added.  
Section 14 Packing Group – Main Heading information was added.  
Section 14 Packing Group – Regulation Data information was added.  
Section 14 Proper Shipping Name information was added.  
Section 14 Regulations – Main Headings information was added.  
Section 14 Segregation – Regulation Data information was added.  
Section 14 Segregation Code – Main Heading information was added.  
Section 14 Special Precautions – Main Heading information was added.  
Section 14 Special Precautions – Regulation Data information was added.  
Section 14 Transport Category – Main Heading information was added.  
Section 14 Transport Category – Regulation Data information was added.  
Section 14 Transport in bulk – Regulation Data information was added.  
Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.  
Section 14 Transport Not Permitted – Main Heading information was added.  
Section 14 Transport Not Permitted – Regulation Data information was added.  
Section 14 Tunnel Code – Main Heading information was added.  
Section 14 Tunnel Code – Regulation Data information was added.  
Section 14 UN Number Column data information was added.  
Section 14 UN Number information was added.  
Section 14: Transportation classification information was modified.  
Section 15: Carcinogenicity information information was modified.  
Section 15: Regulations - Inventories information was added.

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

**3M United Kingdom MSDSs are available at [www.3M.com/uk](http://www.3M.com/uk)**