



## Safety Data Sheet

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<b>Document group:</b>	11-3168-9	<b>Version number:</b>	25.04
<b>Revision date:</b>	13/11/2023	<b>Supersedes date:</b>	23/05/2023
<b>Transportation version number:</b>			

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

### IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

3M(TM) Scotch-Weld(TM) Epoxy Adhesive 2216 Gray

#### Product Identification Numbers

62-2216-0530-6      62-2216-1436-5

7000000812      7100262036

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

##### Identified uses

Structural adhesive.

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

**Address:** 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.  
**Telephone:** +353 1 280 3555  
**E Mail:** tox.uk@mmm.com

**Website:** www.3M.com

#### 1.4. Emergency telephone number

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

**This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet for each of these components is included. Please do not separate the component Safety Data Sheets from this cover page. The document numbers of the MSDSs for components of this product are:**

10-3167-3, 10-3174-9

### TRANSPORTATION INFORMATION

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

## KIT LABEL

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

#### CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315

Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

Skin Sensitization, Category 1 - Skin Sens. 1; 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

WARNING.

#### Symbols

GHS07 (Exclamation mark) |GHS09 (Environment) |

#### Pictograms



Contains:

bis-[4-(2,3-epoxipropoxy)phenyl]propane; Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine

#### HAZARD STATEMENTS:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
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:

P261A	Avoid breathing vapours.
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.
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P333 + P313                      If skin irritation or rash occurs: Get medical advice/attention.  
P391                                Collect spillage.

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

**<=125 ml Hazard statements**

H317                                May cause an allergic skin reaction.

**<=125 ml Precautionary statements**

**Prevention:**

P280E                                Wear protective gloves.

**Response:**

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

**Revision information:**

Kit: Component document group number(s) information was modified.

Label: CLP Ingredients - kit components information was modified.



## Safety Data Sheet

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<b>Document group:</b>	10-3167-3	<b>Version number:</b>	19.01
<b>Revision date:</b>	08/07/2025	<b>Supersedes date:</b>	20/02/2025

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

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

#### 1.1. Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive 2216 Gray Part B

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

##### Identified uses

Product

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

**Address:** 3M Ireland Limited, 70 SIR JOHN ROGERSON'S QUAY, D02R296 DUBLIN 2  
**Telephone:** +353 1 280 3555  
**E Mail:** ner-productstewardship@mmm.com  
**Website:** www.3M.com

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazard identification

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

CLP REGULATION (EC) No 1272/2008

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

##### CLASSIFICATION:

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

For full text of H phrases, see Section 16.

#### 2.2. Label elements

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

**SIGNAL WORD**

WARNING.

**Symbols**

GHS07 (Exclamation mark) |GHS09 (Environment) |

**Pictograms**



**Ingredients:**

Ingredient	CAS Nbr	EC No.	% by Wt
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	216-823-5	70 - 80

**HAZARD STATEMENTS:**

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

**PRECAUTIONARY STATEMENTS**

**Prevention:**

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

**Response:**

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

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

**<=125 ml Hazard statements**

H317	May cause an allergic skin reaction.
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**<=125 ml Precautionary statements**

**Prevention:**

P280E	Wear protective gloves.
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**Response:**

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

None known.

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

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Not applicable

**3.2. Mixtures**

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
bis-[4-(2,3-epoxipropoxy)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5 (REACH-No.) 01-2119456619-26	70 - 80	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Kaolin	(CAS-No.) 1332-58-7 (EC-No.) 310-194-1	20 - 30	Substance with a national occupational exposure limit
Titanium dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5 (REACH-No.) 01-2119489379-17	< 1	Carc. 2, H351 (inhalation)

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

**Specific Concentration Limits**

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

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

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

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

**Skin contact**

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

**Eye contact**

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

**If swallowed**

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

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

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

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

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

Not applicable

**SECTION 5: Fire-fighting measures**

**5.1. Extinguishing media**

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

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

None inherent in this product.

**Hazardous Decomposition or By-Products**

**Substance**

Aldehydes.  
Hydrocarbons.  
Carbon monoxide  
Carbon dioxide.  
Hydrogen Chloride  
Ketones.  
Toxic vapour, gas, particulate.

**Condition**

During combustion.  
During combustion.  
During combustion.  
During combustion.  
During combustion.  
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**

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

**6.2. Environmental precautions**

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

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

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

**6.4. Reference to other sections**

Refer to Section 8 and Section 13 for more information

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

For industrial/occupational use only. Not for consumer sale or use. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

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

Store away from acids. Store away from oxidising agents.

**7.3. Specific end use(s)**

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

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Occupational exposure limits**

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>
Kaolin	1332-58-7	Ireland OELs	TWA(as respirable dust)(8 hours):2 mg/m <sup>3</sup>	
Titanium dioxide	13463-67-7	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m <sup>3</sup> ;TWA(as respirable dust)(8 hours):4 mg/m <sup>3</sup>	

Ireland OELs : Ireland. OELs

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

**Biological limit values**

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

**Derived no effect level (DNEL)**

<b>Ingredient</b>	<b>Degradation Product</b>	<b>Population</b>	<b>Human exposure pattern</b>	<b>DNEL</b>
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Dermal, Short-term exposure, Systemic effects	8.3 mg/kg bw/d
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	12.3 mg/m <sup>3</sup>
bis-[4-(2,3-epoxipropoxy)phenyl]propane		Worker	Inhalation, Short-term exposure, Systemic effects	12.3 mg/m <sup>3</sup>

**Predicted no effect concentrations (PNEC)**

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

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

## 8.2. Exposure controls

In addition, refer to the annex for more information.

### 8.2.1. Engineering controls

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

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

Safety glasses with side shields.

Indirect vented goggles.

#### *Applicable Norms/Standards*

Use eye protection conforming to EN 166

#### Skin/hand protection

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

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

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

*Applicable Norms/Standards*

Use gloves tested to EN 374

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

**Respiratory protection**

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

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

Half facepiece or full facepiece supplied-air respirator

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

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>	Liquid.
<b>Specific Physical Form:</b>	Viscous Liquid
<b>Colour</b>	Grey
<b>Odor</b>	Slight Epoxy
<b>Odour threshold</b>	<i>No data available.</i>
<b>Melting point/freezing point</b>	<i>Not applicable.</i>
<b>Boiling point/boiling range</b>	<i>Not applicable.</i>
<b>Flammability</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	<i>Not applicable.</i>
<b>Flammable Limits(UEL)</b>	<i>Not applicable.</i>
<b>Flash point</b>	248 °C [ <i>Test Method:</i> Pensky-Martens Closed Cup]
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>pH</b>	<i>substance/mixture is non-soluble (in water)</i>
<b>Kinematic Viscosity</b>	84,586 mm <sup>2</sup> /sec
<b>Water solubility</b>	Nil
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Vapour pressure</b>	<=13.3 Pa [ <i>@ 25 °C</i> ]
<b>Density</b>	1.33 g/ml [ <i>@ 20 °C</i> ]
<b>Relative density</b>	1.33 [ <i>@ 20 °C</i> ] [ <i>Ref Std:</i> WATER=1]
<b>Relative Vapour Density</b>	<i>Not applicable.</i>
<b>Particle Characteristics</b>	<i>Not applicable.</i>

## 9.2. Other information

### 9.2.2 Other safety characteristics

EU Volatile Organic Compounds

*No data available.*

Evaporation rate

*Not applicable.*

Molecular weight

*No data available.*

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

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

### 10.5 Incompatible materials

Strong acids.

Strong oxidising agents.

### 10.6 Hazardous decomposition products

<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

No health effects are expected.

#### Skin contact

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

#### Eye contact

Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion**

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

**Toxicological Data**

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

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
Kaolin	Dermal		LD50 estimated to be > 5,000 mg/kg
Kaolin	Ingestion	Human	LD50 > 15,000 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Rabbit	Mild irritant
Kaolin	Professional judgement	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Rabbit	Moderate irritant
Kaolin	Professional judgement	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

**Skin Sensitisation**

Name	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Human and animal	Sensitising
Titanium dioxide	Human and animal	Not classified

**Respiratory Sensitisation**

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

**Germ Cell Mutagenicity**

**3M™ Scotch-Weld™ Epoxy Adhesive 2216 Gray Part B**

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

**Carcinogenicity**

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

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

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

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

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

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Kaolin	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL NA	occupational exposure
Kaolin	Inhalation	pulmonary fibrosis	Not classified	Rat	NOAEL Not available	
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not	occupational

**3M™ Scotch-Weld™ Epoxy Adhesive 2216 Gray Part B**

					available	exposure
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**Aspiration Hazard**

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

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

**11.2. Information on other hazards**

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

**SECTION 12: Ecological information**

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

**12.1. Toxicity**

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
bis-[4-(2,3-epoxipropoxy)phenyl]propylene oxide	1675-54-3	Activated sludge	Analogous Compound	3 hours	IC50	>100 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propylene oxide	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propylene oxide	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propylene oxide	1675-54-3	Green algae	Experimental	72 hours	ErC50	>11 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propylene oxide	1675-54-3	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propylene oxide	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
Kaolin	1332-58-7	Water flea	Experimental	48 hours	LC50	>1,100 mg/l
Titanium dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3-epoxipropoxy)phenyl]propylene oxide	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry

**3M™ Scotch-Weld™ Epoxy Adhesive 2216 Gray Part B**

bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	117 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Kaolin	1332-58-7	Data not available - insufficient	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not available - insufficient	N/A	N/A	N/A	N/A

**12.3 : Bioaccumulative potential**

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	OECD 117 log Kow HPLC method
Kaolin	1332-58-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	9.6	

**12.4. Mobility in soil**

Material	Cas No.	Test type	Study Type	Test result	Protocol
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Modeled Mobility in Soil	Koc	450 l/kg	Episuite™

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

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

**12.6. Endocrine disrupting properties**

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

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

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

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

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

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

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

20 01 27\* Paint, inks, adhesives and resins containing dangerous substances

**SECTION 14: Transportation information**

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

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

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

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

**CAS Nbr**

1675-54-3

**Classification**

Gr. 3: Not classifiable

**Regulation**

International Agency for Research on Cancer



H411 Toxic to aquatic life with long lasting effects.

**Revision information:**

Formulation: Section 16: Annex information was modified.  
 Section 1: Address information was modified.  
 Section 1: E-mail address information was modified.  
 Section 11: Health Effects - Inhalation information information was modified.

**Annex**

<b>1. Title</b>	
<b>Substance identification</b>	bis-[4-(2,3-epoxipropoxy)phenyl]propane; EC No. 216-823-5; CAS Nbr 1675-54-3;
<b>Exposure Scenario Name</b>	Formulation
<b>Lifecycle Stage</b>	Formulation or re-packing
<b>Contributing activities</b>	PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) ERC 02 -Formulation into mixture
<b>Processes, tasks and activities covered</b>	Batch manufacture of a chemical substance or formulation (including polymerisation reactions).
<b>2. Operational conditions and risk management measures</b>	
<b>Operating Conditions</b>	<b>Physical state:</b> Liquid. <b>General operating conditions:</b> Duration of use: 8 hours/day; Emission days per year: <= 225 days per year;
<b>Risk management measures</b>	Under the operational conditions described above the following risk management measures apply: <b>General risk management measures:</b> <b>Human health:</b> Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; <b>Environmental:</b> Waste Water treatment - Incineration;
<b>Waste management measures</b>	Do not apply industrial sludge to natural soils; Prevent leaks and prevent soil / water pollution caused by leaks;
<b>3. Prediction of exposure</b>	
<b>Prediction of exposure</b>	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

<b>1. Title</b>	
<b>Substance identification</b>	bis-[4-(2,3-epoxipropoxy)phenyl]propane; EC No. 216-823-5; CAS Nbr 1675-54-3;
<b>Exposure Scenario Name</b>	Industrial Use of Adhesives
<b>Lifecycle Stage</b>	Use at industrial sites
<b>Contributing activities</b>	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 13 -Treatment of articles by dipping and pouring ERC 05 -Use at industrial site leading to inclusion into/onto article
<b>Processes, tasks and activities covered</b>	Application of product with a roller or brush. Application of product with

	applicator gun. Application with a wipe. Transfers without dedicated controls, including loading, filling, dumping, bagging.
<b>2. Operational conditions and risk management measures</b>	
<b>Operating Conditions</b>	<b>Physical state:</b> Liquid. <b>General operating conditions:</b> Duration of use: 8 hours/day; Emission days per year: 220 days/year; Frequency of exposure at workplace [for one worker]: 5 days/week;
<b>Risk management measures</b>	Under the operational conditions described above the following risk management measures apply: <b>General risk management measures:</b> <b>Human health:</b> Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; <b>Environmental:</b> None needed;
<b>Waste management measures</b>	Do not apply industrial sludge to natural soils; Prevent discharge of undissolved substance to or recover from wastewater;
<b>3. Prediction of exposure</b>	
<b>Prediction of exposure</b>	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

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

3M Ireland MSDSs are available at [www.3M.com](http://www.3M.com)



## Safety Data Sheet

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<b>Document group:</b>	10-3174-9	<b>Version number:</b>	29.01
<b>Revision date:</b>	14/03/2023	<b>Supersedes date:</b>	25/11/2022

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

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

#### 1.1. Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive 2216 Grey Part A

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

##### Identified uses

Structural adhesive.

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

**Address:** 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.  
**Telephone:** +353 1 280 3555  
**E Mail:** tox.uk@mmm.com  
**Website:** www.3M.com

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazard identification

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

CLP REGULATION (EC) No 1272/2008

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

The principle of dilution was used to bridge test results for eye damage/irritation. The test results are reflected in the assigned classification.

##### CLASSIFICATION:

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315  
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319  
Skin Sensitization, Category 1 - Skin Sens. 1; H317  
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**

WARNING.

**Symbols**

GHS07 (Exclamation mark) | GHS09 (Environment) |

**Pictograms**



**Ingredients:**

Ingredient	CAS Nbr	EC No.	% by Wt
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine		701-270-9	30 - 75

**HAZARD STATEMENTS:**

H315	Causes skin irritation.
H319	Causes serious eye irritation.
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:**

P261A	Avoid breathing vapours.
P273	Avoid release to the environment.
P280E	Wear protective gloves.

**Response:**

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

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

**<=125 ml Hazard statements**

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

**<=125 ml Precautionary statements**

**Prevention:**

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

**Response:**

P333 + P313

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

**2.3. Other hazards**

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

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

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Not applicable

**3.2. Mixtures**

<b>Ingredient</b>	<b>Identifier(s)</b>	<b>%</b>	<b>Classification according to Regulation (EC) No. 1272/2008 [CLP]</b>
toluene	(CAS-No.) 108-88-3 (EC-No.) 203-625-9	< 0.75	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Aquatic Chronic 3, H412
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	(EC-No.) 701-270-9 (REACH-No.) 01-2120865952-42	30 - 75	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1A, H317 STOT SE 3, H336 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
Kaolin	(CAS-No.) 1332-58-7 (EC-No.) 310-194-1	30 - 60	Substance with a national occupational exposure limit
Titanium dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5 (REACH-No.) 01-2119489379-17	< 1	Carc. 2, H351 (inhalation)

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

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**

The most important symptoms and effects based on the CLP classification include: Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision). 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**

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**

Amine compounds.  
Carbon monoxide  
Carbon dioxide.  
Oxides of nitrogen.  
Toxic vapour, gas, particulate.

**Condition**

During combustion.  
During combustion.  
During combustion.  
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. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

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

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

**6.4. Reference to other sections**

Refer to Section 8 and Section 13 for more information

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. 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.

**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
toluene	108-88-3	Ireland OELs	TWA(8 hours):192 mg/m3(50 ppm);TWA(8 hours):50 ppm(192 mg/m3);STEL(15 minutes):384 mg/m3(100 ppm);STEL(15 minutes):100 ppm(384 mg/m3)	SKIN
Kaolin	1332-58-7	Ireland OELs	TWA(as respirable dust)(8 hours):2 mg/m3	
Titanium dioxide	13463-67-7	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3	

Ireland OELs : Ireland. OELs  
 TWA: Time-Weighted-Average  
 STEL: Short Term Exposure Limit  
 CEIL: Ceiling

**Biological limit values**

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

**Derived no effect level (DNEL)**

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diylxy)]dipropan-1-		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	3.33 mg/kg bw/d

amine				
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	23.5 mg/m <sup>3</sup>

**Predicted no effect concentrations (PNEC)**

Ingredient	Degradation Product	Compartment	PNEC
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine		Agricultural soil	1,920 mg/kg d.w.
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine		Freshwater sediments	16,300 mg/kg d.w.
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine		Marine water sediments	1,630 mg/kg d.w.
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine		Sewage Treatment Plant	25 mg/l

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

**8.2. Exposure controls**

In addition, refer to the annex for more information.

**8.2.1. Engineering controls**

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

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**

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

*Applicable Norms/Standards*

Use eye protection conforming to EN 166

**Skin/hand protection**

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

<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

**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>	Liquid.
<b>Specific Physical Form:</b>	Viscous.
<b>Colour</b>	Grey
<b>Odor</b>	Pungent Odor
<b>Odour threshold</b>	<i>No data available.</i>
<b>Melting point/freezing point</b>	<i>Not applicable.</i>
<b>Boiling point/boiling range</b>	<i>No data available.</i>
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	<i>Not applicable.</i>
<b>Flammable Limits(UEL)</b>	<i>Not applicable.</i>
<b>Flash point</b>	>=93.9 °C [ <i>Test Method: Closed Cup</i> ]
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>pH</b>	<i>substance/mixture is non-soluble (in water)</i>
<b>Kinematic Viscosity</b>	47,619 mm <sup>2</sup> /sec
<b>Water solubility</b>	Nil
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Vapour pressure</b>	<=13.3 Pa [ <i>@ 25 °C</i> ]
<b>Density</b>	1.26 g/ml [ <i>@ 20 °C</i> ]
<b>Relative density</b>	1.26 [ <i>@ 20 °C</i> ] [ <i>Ref Std: WATER=1</i> ]
<b>Relative Vapour Density</b>	<i>Not applicable.</i>

**9.2. Other information**

### 9.2.2 Other safety characteristics

EU Volatile Organic Compounds  
Evaporation rate  
Molecular weight

*No data available.*  
*Not applicable.*  
*No data available.*

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

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

### 10.5 Incompatible materials

None known.

### 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. May cause additional health effects (see below).

#### Skin contact

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

#### Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the

cornea, and impaired vision.

**Ingestion**

May be harmful if swallowed.

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

**Additional Health Effects:**

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

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.

**Additional information:**

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

**Toxicological Data**

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

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	Dermal	Rat	LD50 > 2,000 mg/kg
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	Ingestion	Rat	LD50 > 2,000 mg/kg
Kaolin	Dermal		LD50 estimated to be > 5,000 mg/kg
Kaolin	Ingestion	Human	LD50 > 15,000 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
toluene	Dermal	Rat	LD50 12,000 mg/kg
toluene	Inhalation-Vapour (4 hours)	Rat	LC50 30 mg/l
toluene	Ingestion	Rat	LD50 5,550 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	Rat	Irritant
Kaolin	Professional judgement	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
toluene	Rabbit	Irritant

**Serious Eye Damage/Irritation**

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Name	Species	Value
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	In vitro data	Severe irritant
Kaolin	Professional judgement	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
toluene	Rabbit	Moderate irritant

**Skin Sensitisation**

Name	Species	Value
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	Guinea pig	Sensitising
Titanium dioxide	Human and animal	Not classified
toluene	Guinea pig	Not classified

**Respiratory Sensitisation**

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

**Germ Cell Mutagenicity**

Name	Route	Value
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	In Vitro	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
toluene	In Vitro	Not mutagenic
toluene	In vivo	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Kaolin	Inhalation	Multiple animal species	Not carcinogenic
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.
toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
toluene	Inhalation	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
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000	29 days

[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine				mg/kg/day	
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring into lactation
toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	Irritation Positive	
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	NOAEL Not available	
toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	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
Kaolin	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL NA	occupational exposure
Kaolin	Inhalation	pulmonary fibrosis	Not classified	Rat	NOAEL Not available	
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure

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toluene	Inhalation	auditory system   eyes   olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
toluene	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
toluene	Inhalation	heart   liver   kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
toluene	Inhalation	hematopoietic system   vascular system	Not classified	Human	NOAEL Not available	occupational exposure
toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
toluene	Ingestion	liver   kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks

**Aspiration Hazard**

Name	Value
toluene	Aspiration hazard

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

**11.2. Information on other hazards**

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

**SECTION 12: Ecological information**

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

**12.1. Toxicity**

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
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**3M™ Scotch-Weld™ Epoxy Adhesive 2216 Grey Part A**

Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	701-270-9	Fathead minnow	Experimental	96 hours	LL50	2.16 mg/l
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	701-270-9	Green algae	Experimental	72 hours	EL50	0.43 mg/l
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	701-270-9	Water flea	Experimental	48 hours	EL50	0.57 mg/l
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	701-270-9	Green algae	Experimental	72 hours	NOEL	0.28 mg/l
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	701-270-9	Activated sludge	Experimental	3 hours	EC50	410.3 mg/l
toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
toluene	108-88-3	Grass Shrimp	Experimental	96 hours	LC50	9.5 mg/l
toluene	108-88-3	Green algae	Experimental	72 hours	EC50	12.5 mg/l
toluene	108-88-3	Leopard frog	Experimental	9 days	LC50	0.39 mg/l
toluene	108-88-3	Pink Salmon	Experimental	96 hours	LC50	6.41 mg/l
toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
toluene	108-88-3	Coho Salmon	Experimental	40 days	NOEC	1.39 mg/l
toluene	108-88-3	Diatom	Experimental	72 hours	NOEC	10 mg/l
toluene	108-88-3	Water flea	Experimental	7 days	NOEC	0.74 mg/l
toluene	108-88-3	Activated sludge	Experimental	12 hours	IC50	292 mg/l
toluene	108-88-3	Bacteria	Experimental	16 hours	NOEC	29 mg/l
toluene	108-88-3	Bacteria	Experimental	24 hours	EC50	84 mg/l
toluene	108-88-3	Redworm	Experimental	28 days	LC50	>150 mg per kg of bodyweight
toluene	108-88-3	Soil microbes	Experimental	28 days	NOEC	<26 mg/kg (Dry Weight)
Kaolin	1332-58-7	Water flea	Experimental	48 hours	LC50	>1,100 mg/l
Titanium dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l

**3M™ Scotch-Weld™ Epoxy Adhesive 2216 Grey Part A**

Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	701-270-9	Experimental Biodegradation	28 days	BOD	0 %BOD/ThO D	OECD 301F - Manometric respirometry
toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 %BOD/ThO D	APHA Std Meth Water/Wastewater
toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	
Kaolin	1332-58-7	Data not available - insufficient	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not available - insufficient	N/A	N/A	N/A	N/A

**12.3 : Bioaccumulative potential**

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	701-270-9	Modeled Bioconcentration		Bioaccumulation factor	42	Catalogic™
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	701-270-9	Modeled Bioconcentration		Log Kow	11.7	Episuite™
toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	
toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	
Kaolin	1332-58-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	9.6	

**12.4. Mobility in soil**

Material	Cas No.	Test type	Study Type	Test result	Protocol
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	701-270-9	Modeled Mobility in Soil	Koc	3,780,000,000 l/kg	
toluene	108-88-3	Experimental Mobility in Soil	Koc	37-160 l/kg	

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

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

**12.6. Endocrine disrupting properties**

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

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

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

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

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

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

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

**SECTION 14: Transportation information**

	<b>Ground Transport (ADR)</b>	<b>Air Transport (IATA)</b>	<b>Marine Transport (IMDG)</b>
<b>14.1 UN number or ID number</b>	UN3082	UN3082	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(ALIPHATIC POLYMER DIAMINE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(ALIPHATIC POLYMER DIAMINE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(ALIPHATIC POLYMER DIAMINE)
<b>14.3 Transport hazard class(es)</b>	9	9	9
<b>14.4 Packing group</b>	III	III	III
<b>14.5 Environmental hazards</b>	Environmentally Hazardous	Not applicable	Marine Pollutant
<b>14.6 Special precautions for user</b>	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.

<b>14.7 Marine Transport in bulk according to IMO instruments</b>	No data available.	No data available.	No data available.
<b>Control Temperature</b>	No data available.	No data available.	No data available.
<b>Emergency Temperature</b>	No data available.	No data available.	No data available.
<b>ADR Classification Code</b>	M6	Not applicable.	Not applicable.
<b>IMDG Segregation Code</b>	Not applicable.	Not applicable.	NONE

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

## SECTION 15: Regulatory information

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

#### Carcinogenicity

<u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
Titanium dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
toluene	108-88-3	Gr. 3: Not classifiable	International Agency for Research on Cancer

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

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

<u>Ingredient</u>	<u>CAS Nbr</u>
toluene	108-88-3

Restriction status: listed in REACH Annex XVII

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

#### Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

**DIRECTIVE 2012/18/EU**

Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
E1 Hazardous to the Aquatic environment	100	200

Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
toluene	108-88-3	10	50

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

No chemicals listed

**15.2. Chemical Safety Assessment**

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

**SECTION 16: Other information**

**List of relevant H statements**

- H225 Highly flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H351i Suspected of causing cancer by inhalation.
- H361d Suspected of damaging the unborn child.
- H373 May cause 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:**

- CLP: Ingredient table information was modified.
- Section 3: Composition/ Information of ingredients table information was modified.
- Section 12: Component ecotoxicity information information was modified.
- Section 12: Persistence and Degradability information information was modified.
- Section 12:Biocumulative potential information information was modified.

**Annex**

1. Title	
Substance identification	
Exposure Scenario Name	Industrial Transfer
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-

	dedicated facilities PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) ERC 02 -Formulation into mixture
<b>Processes, tasks and activities covered</b>	Transfers with dedicated controls, including loading, filling, dumping, bagging.
<b>2. Operational conditions and risk management measures</b>	
<b>Operating Conditions</b>	<b>Physical state:</b> Liquid. <b>General operating conditions:</b> Duration of use: 8 hours/day; Frequency of exposure at workplace [for one worker]: 5 days/week; Indoor use; Outdoor use;
<b>Risk management measures</b>	Under the operational conditions described above the following risk management measures apply: <b>General risk management measures:</b> <b>Human health:</b> Face shield; Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. Refer to Section 8 of the SDS for specific glove material.; <b>Environmental:</b> None needed;
<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>	
<b>Exposure Scenario Name</b>	Industrial Use of Structural Adhesives
<b>Lifecycle Stage</b>	Use at industrial sites
<b>Contributing activities</b>	PROC 04 -Chemical production where opportunity for exposure arises PROC 05 -Mixing or blending in batch processes PROC 13 -Treatment of articles by dipping and pouring ERC 06d -Use of reactive process regulators in polymerisation processes at industrial site (inclusion or not into/onto article)
<b>Processes, tasks and activities covered</b>	Charging material in open systems where significant opportunity for exposure arises e.g. charging from open drum. Mixing or blending of solid or liquid materials.
<b>2. Operational conditions and risk management measures</b>	
<b>Operating Conditions</b>	<b>Physical state:</b> Liquid. <b>General operating conditions:</b> Duration of use: 8 hours/day; Frequency of exposure at workplace [for one worker]: 5 days/week; Indoor use;
<b>Risk management measures</b>	Under the operational conditions described above the following risk management measures apply: <b>General risk management measures:</b> <b>Human health:</b> Goggles - Chemical resistant; Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. Refer to Section 8 of the SDS for specific glove material.; <b>Environmental:</b> None needed;

<b>Waste management measures</b>	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
<b>3. Prediction of exposure</b>	
<b>Prediction of exposure</b>	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

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

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