

## Safety Data Sheet

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Revision date:	13/09/2023	Supersedes date:	31/01/2023
Transportation version number:			

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006), as amended for GB.

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

#### 1.1. Product identifier

3M Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2216 B/A Grey

<b>Product Identification</b> 62-2216-0540-5	Numbers 62-2216-5440-3	62-2216-6440-2	87-2500-0352-9	87-3300-0260-8
700000813	700000814	7100011693	7000043050	7100269534

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

#### **Identified uses**

2-part 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 000E Mail:tox.uk@mmm.com

Website: www.3M.com/uk

#### **1.4. Emergency telephone number** +44 (0)1344 858 000

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:

10-9142-0, 10-9143-8

## **TRANSPORTATION INFORMATION**

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

## **KIT LABEL**

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

#### The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

#### **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 The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

SIGNAL WORD WARNING.

Symbols GHS07 (Exclamation mark) |GHS09 (Environment) |

#### Pictograms



#### **Contains:**

H410

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

Very toxic to aquatic life with long lasting effects.

#### HAZARD STATEMENTS:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
	-

#### 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. present and easy to do. Continue rinsing.	Remove contact lenses, if
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 statement	s
Prevention: P261A	Avoid breathing vapours

P280E

Avoid breathing vapours. Wear protective gloves.

#### **Response:**

P333 + P313

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

#### **Revision information:**

GB Label: CLP Ingredients - kit components information was modified.

Section 2: <125ml Hazard - Health information was modified.

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

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

Label: CLP Classification information was modified.

Label: CLP Precautionary - Prevention information was modified.

Label: CLP Precautionary - Response information was modified.

Label: Graphic information was modified.

Label: Signal Word information was modified.



## Safety Data Sheet

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Document group:	10-9143-8	Version number:	20.00
Revision date:	13/09/2023	Supersedes date:	31/01/2023

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006), as amended for GB.

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

#### 1.1. Product identifier

3M Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2216 B/A Grey, Part A

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

Identified uses

Adhesive

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

Address:	3M 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

#### The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

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.

A similar mixture has been tested for eye damage/irritation and the test results do not meet the criteria for 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

#### The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

#### SIGNAL WORD

WARNING.

#### Symbols

GHS07 (Exclamation mark) |GHS09 (Environment) |

#### **Pictograms**

P280E



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	45 - 70

#### 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:		
P261A	Avoid breathing vapours.	

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

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP], as amended for GB
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	45 - 70	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 - 50	Substance with a national occupational exposure limit
Titanium dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5	< 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 GB 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

<u>Substance</u>	<u>Condition</u>
Amine compounds.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Irritant vapours or gases.	During combustion.

#### **5.3.** Advice for fire-fighters

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

## **SECTION 6: Accidental release measures**

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

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

#### 6.2. Environmental precautions

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

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

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

#### 6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

## **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

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

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

Store in a well-ventilated place. Keep container tightly closed. 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
toluene	108-88-3	UK HSC	TWA: 191 mg/m <sup>3</sup> (50 ppm);	SKIN
			STEL: 384 mg/m <sup>3</sup> (100 ppm)	
Kaolin	1332-58-7	UK HSC	TWA (as respirable dust): 2	
			mg/m <sup>3</sup>	
Titanium dioxide	13463-67-7	UK HSC	TWA(respirable):4	
			mg/m3;TWA(Inhalable):10	
			mg/m3	

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.

#### 8.2. Exposure controls

#### 8.2.1. Engineering controls

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

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

#### **Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended: 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 Polymer laminate **Thickness (mm)** No data available Breakthrough Time 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	Liquid.
Colour	Grey
Odor	Pungent Odor
Odour threshold	No data available.
Melting point/freezing point	Not applicable.
Boiling point/boiling range	>=152.2 °C
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Flash point	>=151.7 °C [ <i>Test Method</i> :Closed Cup]
Autoignition temperature	No data available.
Decomposition temperature	No data available.
рН	substance/mixture is non-soluble (in water)
Kinematic Viscosity	47,619 mm <sup>2</sup> /sec
Water solubility	Nil
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.

Vapour pressure Relative density Relative Vapour Density

9.2. Other information

9.2.2 Other safety characteristics EU Volatile Organic Compounds Evaporation rate Molecular weight Percent volatile

No data available. No data available. No data available. Negligible

## **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 oxidising agents.

## 10.6 Hazardous decomposition products

<u>Substance</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 material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

11.1. Information on hazard classes as defined in the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain.

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

#### Page: 7 of 17

Condition

<=186,158.4 Pa [@ 55 °C ] 1.26 [*Ref Std*:WATER=1] *No data available.*  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	Professio	No significant irritation
	nal	
	judgemen	

	t	
Titanium dioxide	Rabbit	No significant irritation
toluene	Rabbit	Irritant

#### Serious Eye Damage/Irritation

Name	Species	Value
Reaction products of fatty acids, C18-unsaturated, dimers and trimers with 3,3'-	In vitro	Severe irritant
[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	data	
Kaolin	Professio	No significant irritation
	nal	
	judgemen	
	t	
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'-	Guinea	Sensitising
[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine	pig	
Titanium dioxide	Human	Not classified
	and	
	animal	
toluene	Guinea	Not classified
	pig	

#### **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'-	In Vitro	Not mutagenic
[oxybis(ethane-2,1-diyloxy)]dipropan-1-amine		
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	Not carcinogenic
		animal	
		species	
Titanium dioxide	Ingestion	Multiple	Not carcinogenic
		animal	
		species	
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	Ro	ute	Value	Species	Test result	Exposure Duration
Reaction products of fatty acids,	C18- Ing	estion	Not classified for female reproduction	Rat	NOAEL	premating

unsaturated, dimers and trimers with 3,3'- [oxybis(ethane-2,1-diyloxy)]dipropan-1- amine				1,000 mg/kg/day	into lactation
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 male reproduction	Rat	NOAEL 1,000 mg/kg/day	29 days
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	premating 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
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 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	Туре	Exposure	Test endpoint	Test result
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)
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
	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	701-270-9	Activated sludge	Experimental	3 hours	EC50	410.3 mg/l

3,3'- [oxybis(ethane-2,1- diyloxy)]dipropan- 1-amine						
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
toluene	108-88-3	Experimental Biodegradation	20 days	BOD	80 %BOD/ThOD	APHA Std Meth Water/Wastewater
toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	
Reaction products of fatty acids, C18- unsaturated, dimers and trimers with 3,3'- [oxybis(ethane-2,1- diyloxy)]dipropan- 1-amine		Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301F - Manometric respirometry
Kaolin	1332-58-7	Data not availbl- insufficient	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not availbl- insufficient	N/A	N/A	N/A	N/A

## 12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	
toluene	108-88-3	Experimental Bioconcentration		Log Kow	2.73	
Reaction products of fatty acids, C18- unsaturated, dimers and trimers with 3,3'- [oxybis(ethane-2,1- diyloxy)]dipropan- 1-amine		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		Modeled Bioconcentration		Log Kow	11.7	Episuite™
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
toluene	108-88-3	Experimental Mobility in Soil	Koc	37-160 l/kg	
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	

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

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

#### 12.6. Other adverse effects

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

## **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

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

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

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

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

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

## **SECTION 14: Transportation information**

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	UN3082	UN3082	UN3082
14.2 UN proper shipping name	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)
14.3 Transport hazard	9	9	9

class(es)			
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	M6	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

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

## **SECTION 15: Regulatory information**

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

Carcinogenicity <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 to Annex XVII of regulation (EC) 1907/2006, as amended for GB, with regard to restrictions on the manufacture, placing on the market and use when present in certain dangerous conditions. 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 UK REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 as amended for Great Britain 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 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 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.

#### **COMAH Regulation, SI 2015/483**

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	100	200
environment		

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, as amended for GB

No chemicals listed

#### 15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended for GB.

## **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:**

GB Section 02: CLP Ingredient table information was modified. GB Section 04: First Aid - Symptoms and Effects (GB CLP) information was modified. Section 2: <125ml Hazard - Health information was modified. Section 2: <125ml Precautionary - Prevention information was modified. Section 2: <125ml Precautionary - Response information was modified. Label: CLP Classification information was modified. Label: CLP Precautionary - Prevention information was modified. Label: CLP Precautionary - Response information was modified. Label: Graphic information was modified. Label: Signal Word information was modified. Section 4: First aid for eve contact information information was modified. Section 8: Eye/face protection information information was modified. Section 11: Health Effects - Eve information information was modified. Section 14 Classification Code - Regulation Data information was modified. Section 14 Hazard Class + Sub Risk - Regulation Data information was modified. Section 14 Hazardous/Not Hazardous for Transportation information was modified. Section 14 Other Dangerous Goods - Regulation Data information was modified. Section 14 Packing Group - Regulation Data information was modified. Section 14 Proper Shipping Name information was modified. Section 14 Segregation - Regulation Data information was modified. Section 14 UN Number Column data information was modified. Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

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#### 3M SDSs for Great Britain are available at www.3M.com/uk

For Northern Ireland documents, please contact your 3M representative to obtain a copy.



## Safety Data Sheet

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Document group:	10-9142-0	Version number:	20.00
Revision date:	07/03/2023	Supersedes date:	17/05/2022

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (1907/2006), as amended for GB.

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

#### 1.1. Product identifier

3M Scotch-Weld<sup>™</sup> Epoxy Adhesive EC-2216 B/A Grey, Part B

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

#### Identified uses

Part B of 2-part 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

#### The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

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

The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

## SIGNAL WORD

WARNING.

#### Symbols

GHS07 (Exclamation mark) |GHS09 (Environment) |

#### Pictograms



Ingredient	CAS Nbr	EC No.	% by Wt
bis-[4-(2,3-epoxipropoxi)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 P280E	Avoid release to the environment. Wear protective gloves.
<b>Response:</b> P305 + P351 + P338 P333 + P313 P391	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. 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 statemer	its
<b>Prevention:</b> P280E	Wear protective gloves.
<b>Response:</b> P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
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], as amended for GB
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	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	< 0.7	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
		(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 GB 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

<u>Substance</u>	<u>Condition</u>
Aldehydes.	During combustion.
Hydrocarbons.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Ketones.	During combustion.
Toxic vapour, gas, particulate.	During combustion.

#### 5.3. Advice for fire-fighters

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

## **SECTION 6: Accidental release measures**

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

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. 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.

Limit type

mg/m<sup>3</sup>

mg/m3

TWA (as respirable dust): 2

mg/m3;TWA(Inhalable):10

TWA(respirable):4

<b>Ingredient</b> Kaolin	<b>CAS Nbr</b> 1332-58-7	8 2
Titanium dioxide	13463-67-7	UK HSC

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.

#### 8.2. Exposure controls

#### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Provide appropriate local exhaust when product is heated. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining.

#### **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.

**Additional comments** 

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 Polymer laminate Thickness (mm) No data available Breakthrough Time 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	Liquid.
Colour	Off-White
Odor	Slight Epoxy
Odour threshold	No data available.
Melting point/freezing point	No data available.
Boiling point/boiling range	>=260 °C
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Flash point	>=248.9 °C [ <i>Test Method</i> :Closed Cup]
Autoignition temperature	No data available.
Decomposition temperature	No data available.
рН	substance/mixture is non-soluble (in water)
Kinematic Viscosity	84,586 mm <sup>2</sup> /sec
Water solubility	Nil
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Vapour pressure	<=186,158.4 Pa [@ 55 °C ]
Density	1.33 g/ml
Relative density	1.33 [ <i>Ref Std</i> :WATER=1]
Relative Vapour Density	No data available.

#### 9.2. Other information

9.2.2 Other safety characteristics EU Volatile Organic Compounds

No data available.

Evaporation rate Molecular weight Percent volatile Not applicable. No data available. 0.06 % weight [*Test Method*:Tested per ASTM protocol]

## **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

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

#### 10.2 Chemical stability

Stable.

#### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

#### **10.4 Conditions to avoid**

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

**10.5 Incompatible materials** Strong acids. Strong oxidising agents.

#### 10.6 Hazardous decomposition products

Substance

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 material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

11.1. Information on hazard classes as defined in the retained CLP Regulation (EU) No 1272/2008, as amended for Great Britain.

#### Signs and Symptoms of Exposure

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

#### Inhalation

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

#### Skin contact

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

#### Eye contact

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

## Ingestion

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Condition

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

#### **Toxicological Data**

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

#### **Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
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-epoxipropoxi)phenyl]propane	Rabbit	Mild irritant
Kaolin	Professio	No significant irritation
	nal	
	judgemen	
	t	
Titanium dioxide	Rabbit	No significant irritation

#### Serious Eye Damage/Irritation

Name	Species	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Moderate irritant
Kaolin	Professio	No significant irritation
	nal	
	judgemen	
	t	
Titanium dioxide	Rabbit	No significant irritation

#### **Skin Sensitisation**

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

#### **Respiratory Sensitisation**

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

#### Germ Cell Mutagenicity

Name	Route	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In vivo	Not mutagenic

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

#### Carcinogenicity

Name	Route	Species	Value
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
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-epoxipropoxi)phenyl]propane	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation

#### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

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

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3- epoxipropoxi)phenyl]prop ane	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
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

#### **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 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	Туре	Exposure	Test endpoint	Test result
bis-[4-(2,3- epoxipropoxi)phen yl]propane	1675-54-3	Activated sludge	Analogous Compound	3 hours	IC50	>100 mg/l
bis-[4-(2,3- epoxipropoxi)phen yl]propane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3- epoxipropoxi)phen yl]propane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3- epoxipropoxi)phen yl]propane	1675-54-3	Green algae	Experimental	72 hours	ErC50	>11 mg/l
bis-[4-(2,3- epoxipropoxi)phen yl]propane	1675-54-3	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3- epoxipropoxi)phen yl]propane	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- epoxipropoxi)phen yl]propane	1675-54-3	Experimental Biodegradation	28 days	BOD		OECD 301F - Manometric respirometry
bis-[4-(2,3- epoxipropoxi)phen yl]propane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)		OECD 111 Hydrolysis func of pH
Kaolin	1332-58-7	Data not availbl- insufficient	N/A	N/A	N/A	N/A

					-	
Titanium dioxide	13463-67-7	Data not availbl-	N/A	$N/\Delta$	NI/A	NI/A
I fitalifulli uloxiuc	15405-07-7	Data not avanoi-	1 N/ 21	1 N/ / A	11/71	N/A
		:				
		insufficient				

#### **12.3 : Bioaccumulative potential**

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3- epoxipropoxi)phen yl]propane	1675-54-3	Experimental Bioconcentration		Log Kow		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	5	Bioaccumulation factor	9.6	

#### 12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
bis-[4-(2,3- epoxipropoxi)pheny l]propane		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. Other adverse effects

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

## **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

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

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

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

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

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

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

## **SECTION 14: Transportation information**

Ground Transport (ADR) Air Transport (IATA	A) Marine Transport (IMDG)
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14.1 UN number	UN3082	UN3082	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(4,4'- ISOPROPYLIDENEDIPHE NOL-EPICHLOROHYDRIN POLYMER)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(4,4'- ISOPROPYLIDENEDIPHEN OL-EPICHLOROHYDRIN POLYMER)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(4,4'- ISOPROPYLIDENEDIPHENOL- EPICHLOROHYDRIN POLYMER)
14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	M6	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

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

## **SECTION 15: Regulatory information**

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

Ca	rcinogenicity <u>Ingredient</u>	<u>CAS Nbr</u>	<u>Classification</u>	<u>Regulation</u>
	bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Gr. 3: Not classifiable	International Agency for Research on Cancer
	Titanium dioxide	13463-67-7	Grp. 2B: Possible human carc.	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 to Annex XVII of regulation (EC) 1907/2006, as amended for GB, with regard to restrictions on the manufacture, placing on the market and use when present in certain dangerous

conditions. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

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

Restriction status: listed in UK REACH Annex XVII Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 as amended for Great Britain 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 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 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.

#### COMAH Regulation, SI 2015/483

Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of		
	Lower-tier requirements	Upper-tier requirements	
E2 Hazardous to the Aquatic	200	500	
environment			

Seveso named dangerous substances, Annex 1, Part 2 None

#### Regulation (EU) No 649/2012, as amended for GB

No chemicals listed

#### 15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this substance/mixture in accordance with Regulation (EC) No 1907/2006, as amended for GB.

## **SECTION 16: Other information**

#### List of relevant H statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351i	Suspected of causing cancer by inhalation.

H411 Toxic to aquatic life with long lasting effects.

#### **Revision information:**

Formulation: Section 16: Annex information was deleted. GB Section 02: CLP Ingredient table information was added. GB Section 02: Other hazards phrase information was added. GB Section 04: First Aid - Symptoms and Effects (GB CLP) information was added. GB Section 04: Information on toxicological effects information was added. GB Section 12: Classification Warning information was added. GB Section 15: Carcinogenicity information information was added. GB Section 15: Chemical Safety Assessment information was added. GBSDS Section 14 Transport in bulk - Main Heading information was added. GBSDS Section 14 UN Number information was added. Industrial Use of Adhesives: Section 16: Annex information was deleted. CLP: Ingredient table information was deleted. Section 2: Other hazards phrase information was deleted. Section 3: Composition/ Information of ingredients table information was added. Section 3: Composition/ Information of ingredients table information was deleted. Section 03: SCL table information was added. Section 03: SCL table information was deleted. Section 04: First Aid - Symptoms and Effects (CLP) information was deleted. Section 04: Information on toxicological effects information was deleted. Section 8: 8.2. Exposure controls information information was deleted. Section 8: 8.2.3. Environmental exposure controls information information was deleted. Section 8: DNEL table row information was deleted. Section 8: PNEC table row information was deleted. Section 9: Vapour density value information was modified. Section 11: Classification disclaimer information was deleted. Section 11: GB Classification disclaimer information was added. Section 11: GB No endocrine disruptor information available warning information was added. Section 11: No endocrine disruptor information available warning information was deleted. Section 12: 12.6. Endocrine Disrupting Properties information was deleted. Section 12: 12.6. Other adverse effects information was added. Section 12: 12.7. Other adverse effects information was deleted. Section 12: Classification Warning information was deleted. Section 12: Component ecotoxicity information information was modified. Section 12: Mobility in soil information information was added. Prints No Data if Adverse effects information is not present information was deleted. Section 12: No Data text for mobility in soil information was deleted. Section 12: No endocrine disruptor information available warning information was added. Section 12: No endocrine disruptor information available warning information was deleted. Section 12: Persistence and Degradability information information was modified. Section 12:Bioccumulative potential information information was modified. Section 14 Classification Code - Regulation Data information was modified. Section 14 Hazard Class + Sub Risk - Regulation Data information was modified. Section 14 Hazardous/Not Hazardous for Transportation information was modified. Section 14 Other Dangerous Goods - Regulation Data information was modified. Section 14 Packing Group - Regulation Data information was modified. Section 14 Proper Shipping Name information was modified. Section 14 Segregation - Regulation Data information was modified. Section 14 Marine transport in bulk according to IMO instruments - Main Heading information was deleted. Section 14 UN Number Column data information was modified. Section 14 UN Number information was deleted. Section 14: Transportation classification information was deleted. Section 15: Carcinogenicity information information was deleted. Section 15: Chemical Safety Assessment information was deleted.

Section 15: Seveso Hazard Category Text information was added.

Section 15: Seveso Hazard Category Text information was deleted.

Annex: Prediction of exposure statement information was deleted.

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

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

Section 16: Web address 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 SDSs for Great Britain are available at www.3M.com/uk

For Northern Ireland documents, please contact your 3M representative to obtain a copy.