



## Safety Data Sheet

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<b>Transportation version number:</b>	6.00 (23/01/2019)		

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

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

#### 1.1. Product identifier

3M Scotch-Weld 1838 Structural Adhesive

#### Product Identification Numbers

FS-9100-3428-9

7000079990

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

#### 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](http://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:**

11-0138-5, 11-0111-2

### TRANSPORTATION INFORMATION

FS-9100-3428-9

**ADR/RID:** UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. LIMITED QUANTITY, (TRIETHYLENETETRAMINE), 8., III, (E), ADR Classification Code: C7.

**IMDG-CODE:** UN2735, AMINES, LIQUID, CORROSIVE, N.O.S., (TRIETHYLENETETRAMINE), 8., III, IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: F-AS-B.

**ICAO/IATA:** UN2735, POLYAMINES, LIQUID, CORROSIVE, N.O.S., (TRIETHYLENETETRAMINE), 8., III.

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 1B - Skin Corr. 1B; H314

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

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

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

For full text of H phrases, see Section 16.

### 2.2. Label elements

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

##### SIGNAL WORD

DANGER.

##### Symbols

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

##### Pictograms



Contains:

3,6-diazaoctanethylenediamin; bis-[4-(2,3-epoxipropoxy)phenyl]propane; Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines

##### HAZARD STATEMENTS:

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

##### PRECAUTIONARY STATEMENTS

##### Prevention:

P260A Do not breathe vapours.

P273 Avoid release to the environment.

P280D Wear protective gloves, protective clothing, and eye/face protection.

##### Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTRE or doctor/physician.

**SUPPLEMENTAL INFORMATION:**

**Supplemental Hazard Statements:**

EUH211

Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

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

**Revision information:**

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

Label: CLP Classification information was modified.

Label: CLP Precautionary - Disposal information was deleted.

Label: CLP Precautionary - Prevention information was modified.

Label: CLP Precautionary - Response information was modified.

Label: CLP Supplemental Hazard Statements information was added.



## Safety Data Sheet

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<b>Document group:</b>	11-0138-5	<b>Version number:</b>	16.00
<b>Revision date:</b>	24/06/2019	<b>Supersedes date:</b>	07/11/2018
<b>Transportation version number:</b>	1.00 (27/03/2010)		

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(tm) Epoxy Structural Adhesive 1838 B/A : 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

CLP REGULATION (EC) No 1272/2008

##### CLASSIFICATION:

Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318  
Skin Corrosion/Irritation, Category 1B - Skin Corr. 1B; H314  
Skin Sensitization, Category 1A - Skin Sens. 1A; H317  
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

#### 2.2. Label elements

CLP REGULATION (EC) No 1272/2008

##### SIGNAL WORD

DANGER.

**Symbols:**

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

**Pictograms**



**Ingredients:**

Ingredient	CAS Nbr	EC No.	% by Wt
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1		70 - 100
Triethylenetetramine	112-24-3	203-950-6	1 - 10

**HAZARD STATEMENTS:**

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS**

**Prevention:**

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

**Response:**

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

**Disposal:**

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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**2.3. Other hazards**

None known.

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

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1			70 - 100	Skin Irrit. 2, H315; Eye Dam. 1, H318; Skin Sens. 1A, H317; Aquatic Chronic 2, H411

Kaolin	1332-58-7	310-194-1		10 - 15	Substance with a Community level exposure limit in the workplace
Triethylenetetramine	112-24-3	203-950-6		1 - 10	Acute Tox. 3, H311; Skin Corr. 1B, H314; Skin Sens. 1A, H317; Aquatic Chronic 3, H412
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5		01-2119379499-16	1 - 5	Substance with a Community level exposure limit in the workplace
Titanium dioxide	13463-67-7	236-675-5		< 0.5	Substance with a Community level exposure limit in the workplace

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

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

## **SECTION 4: First aid measures**

### **4.1. Description of first aid measures**

#### **Inhalation**

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

#### **Skin contact**

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

#### **Eye contact**

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

#### **If swallowed**

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

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

See Section 11.1 Information on toxicological effects

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

Not applicable

## **SECTION 5: Fire-fighting measures**

### **5.1. Extinguishing media**

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

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

None inherent in this product.

### **Hazardous Decomposition or By-Products**

#### **Substance**

Amine compounds.  
Carbon monoxide.

#### **Condition**

During combustion.  
During combustion.

Carbon dioxide.  
Oxides of nitrogen.

During combustion.  
During combustion.

**5.3. Advice for fire-fighters**

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

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

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

**6.2. Environmental precautions**

Avoid release to the environment. 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 metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. 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**

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 away from heat.

**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>
Silicon dioxide	112945-52-5	UK HSC	TWA(as inhalable dust):6	

DUST, INERT OR NUISANCE	1332-58-7	UK HSC	mg/m <sup>3</sup> ;TWA(as respirable dust):2.4 mg/m <sup>3</sup> TWA(as inhalable dust):10 mg/m <sup>3</sup>
Kaolin	1332-58-7	UK HSC	TWA (as respirable dust): 2 mg/m <sup>3</sup>
Titanium dioxide	13463-67-7	UK HSC	TWA(Inhalable):10 mg/m <sup>3</sup> ;TWA(respirable):4 mg/m <sup>3</sup>

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

**Biological limit values**

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

**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 ventilation for cutting, grinding, sanding or machining. Curing enclosures must be exhausted to outdoors or to a suitable emission control device.

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

**Eye/face protection**

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

- Full face shield.
- Indirect vented goggles.

*Applicable Norms/Standards*

Use eye/face protection conforming to EN 166

**Skin/hand protection**

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

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

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

*Applicable Norms/Standards*

Use gloves tested to EN 374

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

**Respiratory protection**



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

Half facepiece or full facepiece air-purifying respirator suitable for 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 type P

## **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>	Paste
<b>Appearance/Odour</b>	Green viscous paste with ammonia odour.
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>No data available.</i>
<b>Boiling point/boiling range</b>	<i>No data available.</i>
<b>Melting point</b>	<i>Not applicable.</i>
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Explosive properties</b>	Not classified
<b>Oxidising properties</b>	Not classified
<b>Flash point</b>	$\geq 180$ °C [ <i>Details: Data for Polyaminoamide</i> ]
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Flammable Limits(LEL)</b>	<i>Not applicable.</i>
<b>Flammable Limits(UEL)</b>	<i>Not applicable.</i>
<b>Relative density</b>	1.04 [ <i>Ref Std: WATER=1</i> ]
<b>Water solubility</b>	Nil
<b>Solubility- non-water</b>	0 %
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Evaporation rate</b>	<i>Not applicable.</i>
<b>Vapour density</b>	<i>Not applicable.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Viscosity</b>	140 - 250 Pa-s [ <i>@ 23 °C</i> ]
<b>Density</b>	0.98 - 1.07 g/ml

### **9.2. Other information**

<b>EU Volatile Organic Compounds</b>	<i>No data available.</i>
<b>Molecular weight</b>	<i>No data available.</i>
<b>Percent volatile</b>	$\leq 1$ % weight

## **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.

#### 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 3M assessments.

### 11.1 Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

##### Inhalation

May be harmful if inhaled. 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

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

##### Eye contact

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

##### Ingestion

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

#### Additional Health Effects:

##### Prolonged or repeated exposure may cause target organ effects:

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

##### Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

#### 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

**3M Scotch-Weld(tm) Epoxy Structural Adhesive 1838 B/A : Part A**

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE5 - 12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Dermal	Rat	LD50 > 2,000 mg/kg
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	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
Triethylenetetramine	Dermal	Rabbit	LD50 550 mg/kg
Triethylenetetramine	Ingestion	Rat	LD50 2,500 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Rat	LD50 > 5,110 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
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	In vitro data	Irritant
Kaolin	Professional judgement	No significant irritation
Triethylenetetramine	Rabbit	Corrosive
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Rabbit	Corrosive
Kaolin	Professional judgement	No significant irritation
Triethylenetetramine	Rabbit	Corrosive
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

**Skin Sensitisation**

Name	Species	Value
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Mouse	Sensitising
Triethylenetetramine	Guinea pig	Sensitising
Synthetic amorphous silica, fumed, crystalline-free	Human and animal	Not classified
Titanium dioxide	Human and animal	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
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	In Vitro	Not mutagenic
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic

### Carcinogenicity

Name	Route	Species	Value
Kaolin	Inhalation	Multiple animal species	Not carcinogenic
Synthetic amorphous silica, fumed, crystalline-free	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
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
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	6 weeks
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Ingestion	heart   liver   immune system   endocrine system   gastrointestinal tract	Not classified	Rat	NOAEL 1,000 mg/kg/day	6 weeks

		bone, teeth, nails, and/or hair   hematopoietic system   nervous system   kidney and/or bladder   respiratory system   vascular system				
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	
Synthetic amorphous silica, fumed, crystalline-free	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
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.**

**SECTION 12: Ecological information**

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

**12.1. Toxicity**

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	Water flea	Estimated	48 hours	EC50	5.18 mg/l
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	Green algae	Experimental	72 hours	EC50	4.11 mg/l
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	Zebra Fish	Estimated	96 hours	LC50	7.07 mg/l
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	Green algae	Experimental	72 hours	NOEC	1.25 mg/l
Kaolin	1332-58-7	Water flea	Experimental	48 hours	LC50	>1,100 mg/l
Triethylenetetramine	112-24-3	Green Algae	Experimental	72 hours	EC50	27.4 mg/l

**3M Scotch-Weld(tm) Epoxy Structural Adhesive 1838 B/A : Part A**

Triethylenetetramine	112-24-3	Guppy	Experimental	96 hours	LC50	570 mg/l
Triethylenetetramine	112-24-3	Water flea	Experimental	48 hours	EC50	37.4 mg/l
Triethylenetetramine	112-24-3	Green Algae	Experimental	72 hours	NOEC	0.468 mg/l
Triethylenetetramine	112-24-3	Water flea	Experimental	21 days	NOEC	2.86 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green Algae	Experimental	72 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green Algae	Experimental	72 hours	NOEC	60 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
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	Experimental Biodegradation	28 days	BOD	15 % BOD/ThBOD	OECD 301D - Closed bottle test
Kaolin	1332-58-7	Data not available or insufficient			N/A	
Triethylenetetramine	112-24-3	Experimental Biodegradation	20 days	BOD	0 % BOD/ThBOD	OECD 301D - Closed bottle test
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available or insufficient			N/A	
Titanium dioxide	13463-67-7	Data not available or insufficient			N/A	

**12.3 : Bioaccumulative potential**

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	Estimated Bioconcentration		Bioaccumulation factor	6.8	Estimated: Bioconcentration factor
Kaolin	1332-58-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Triethylenetetramine	112-24-3	Experimental BCF-Carp	42 days	Bioaccumulation factor	<5.0	OECD 305E - Bioaccumulation flow-through fish test
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	9.6	Other methods

**12.4. Mobility in soil**

Please contact manufacturer for more details

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

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

### 12.6. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste 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. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility.

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

ADR: UN2735; Amines, liquid, corrosive, n.o.s. (TRIETHYLENETETRAMINE); 8; III; (E); C7.

IATA: UN2735; Amines, liquid, corrosive, n.o.s. (TRIETHYLENETETRAMINE); 8; III.

IMDG: UN2735; Amines, liquid, corrosive, n.o.s. (TRIETHYLENETETRAMINE); 8; III; EMS: FA, SB.

## 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

### 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**

H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Revision information:**

Section 3: Composition/ Information of ingredients table information was modified.  
Section 5: Fire - Advice for fire fighters information information was modified.  
Section 11: Germ Cell Mutagenicity Table information was modified.  
Section 11: Reproductive and/or Developmental Effects text information was deleted.  
Section 11: Reproductive Toxicity Table information was modified.  
Section 11: Serious Eye Damage/Irritation Table information was modified.  
Section 11: Skin Corrosion/Irritation Table information was modified.  
Section 11: Target Organs - Repeated 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.  
Section 14: Transportation classification information was modified.  
Section 15: Regulations - Inventories information was deleted.

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.

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





## Safety Data Sheet

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<b>Revision date:</b>	16/11/2021	<b>Supersedes date:</b>	18/08/2020

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

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

#### 1.1. Product identifier

3M Scotch-Weld™ Structural Adhesive 1838 B/A, Part B

#### 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

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 carcinogenicity classification for titanium dioxide is not applicable based on physical form (material is not a powder).

##### 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	60 - 90

#### HAZARD STATEMENTS:

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

#### PRECAUTIONARY STATEMENTS

##### Prevention:

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.

#### SUPPLEMENTAL INFORMATION:

##### Supplemental Hazard Statements:

EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
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2% of the mixture consists of components of unknown acute oral toxicity.

Contains 2% of components with unknown hazards to the aquatic environment.

## 2.3. Other hazards

None known.

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

Not applicable

**3.2. Mixtures**

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
bis-[4-(2,3-epoxipropoxy)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	60 - 90	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
Bentonite	Trade Secret	1 - 5	Substance not classified as hazardous
Limestone	(CAS-No.) 1317-65-3 (EC-No.) 215-279-6	1 - 5	Substance with a national occupational exposure limit
Titanium dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5	< 1.5	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

<u>Substance</u>	<u>Condition</u>
Aldehydes.	During combustion.
Hydrocarbons.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	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.

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional comments</b>
Limestone	1317-65-3	UK HSC	TWA(respirable):4 mg/m3;TWA(as respirable dust):4 mg/m3;TWA(Inhalable):10 mg/m3;TWA(as inhalable dust):10 mg/m3	
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.

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

**8.2. Exposure controls**

**8.2.1. Engineering controls**

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

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

**Eye/face protection**

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

*Applicable Norms/Standards*

Use eye protection conforming to EN 166

**Skin/hand protection**

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

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

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

*Applicable Norms/Standards*

Use gloves tested to EN 374

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

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

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

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

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

*Applicable Norms/Standards*

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

## 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>	Paste
<b>Colour</b>	White
<b>Odor</b>	Epoxy
<b>Odour threshold</b>	No data available.
<b>Melting point/freezing point</b>	No data available.
<b>Boiling point/boiling range</b>	>=200 °C [Details:Boiling point of CAS 25068-38-6]
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	Not applicable.
<b>Flammable Limits(UEL)</b>	Not applicable.
<b>Flash point</b>	>=150 °C [Details:F pt of CAS 25068-38-6]
<b>Autoignition temperature</b>	No data available.
<b>Decomposition temperature</b>	No data available.
<b>pH</b>	substance/mixture is non-soluble (in water)
<b>Kinematic Viscosity</b>	40,769.2307692308 mm <sup>2</sup> /sec
<b>Water solubility</b>	Nil
<b>Solubility- non-water</b>	Nil
<b>Partition coefficient: n-octanol/water</b>	No data available.

Vapour pressure	<i>Not applicable.</i>
Density	1.26 - 1.32 g/ml
Relative density	1.26 - 1.32 [Ref Std:WATER=1]
Relative Vapor Density	<i>Not applicable.</i>

## 9.2. Other information

### 9.2.2 Other safety characteristics

EU Volatile Organic Compounds	<i>No data available.</i>
Evaporation rate	<i>Not applicable.</i>
Molecular weight	<i>No data available.</i>
Percent volatile	<=1 % weight

## 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

None known.

### 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

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**

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-epoxypropoxy)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxypropoxy)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
Limestone	Dermal	Rat	LD50 > 2,000 mg/kg
Limestone	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Limestone	Ingestion	Rat	LD50 6,450 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-epoxypropoxy)phenyl]propane	Rabbit	Mild irritant
Kaolin	Professional judgement	No significant irritation
Limestone	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

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

**Skin Sensitisation**

Name	Species	Value



**3M Scotch-Weld™ Structural Adhesive 1838 B/A, Part B**

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**

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
Limestone	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	prematuring & during gestation

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Limestone	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
bis-[4-(2,3-	Dermal	liver	Not classified	Rat	NOAEL	2 years

epoxipropoxi)phenyl]prop ane					1,000 mg/kg/day	
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	
Limestone	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
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 EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.**

**12.1. Toxicity**

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Activated sludge	Estimated	3 hours	IC50	>100 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Green Algae	Experimental	72 hours	EC50	>11 mg/l
bis-[4-(2,3- epoxipropoxi)phenyl]pr opane	1675-54-3	Green Algae	Experimental	72 hours	NOEC	4.2 mg/l

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bis-[4-(2,3-epoxipropoxy)phenyl]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
Limestone	1317-65-3	Green algae	Estimated	72 hours	EC50	>100 mg/l
Limestone	1317-65-3	Rainbow trout	Estimated	96 hours	LC50	>100 mg/l
Limestone	1317-65-3	Water flea	Estimated	48 hours	EC50	>100 mg/l
Limestone	1317-65-3	Green algae	Estimated	72 hours	EC10	>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]propane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life	117 hours (t <sub>1/2</sub> )	Non-standard method
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
Kaolin	1332-58-7	Data not available or insufficient			N/A	
Limestone	1317-65-3	Data not available or insufficient			N/A	
Titanium dioxide	13463-67-7	Data not available or insufficient			N/A	

**12.3 : Bioaccumulative potential**

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	Non-standard method
Kaolin	1332-58-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Limestone	1317-65-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	9.6	Non-standard method

**12.4. Mobility in soil**

No test data available.

**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</b>	UN3082	UN3082	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(LIQUID EPOXY RESIN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(LIQUID EPOXY RESIN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(LIQUID 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 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code</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 Tunnel Code</b>	(-)	Not applicable.	Not applicable.
<b>ADR Classification Code</b>	M6	Not applicable.	Not applicable.
<b>ADR Transport Category</b>	3	Not applicable.	Not applicable.
<b>ADR Multiplier</b>	1	0	0
<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>
bis-[4-(2,3-epoxipropoxy)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

#### Global inventory status

Contact 3M for more 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 product are in compliance with the new substance notification requirements of CEPA.

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Seveso hazard categories, Annex 1, Part 1  
None

Seveso named dangerous substances, Annex 1, Part 2  
None

## 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.

## 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:

EU Section 09: pH information information was added.  
Label: CLP Classification information was modified.  
Label: CLP Precautionary - Disposal information was deleted.  
Label: CLP Precautionary - Prevention information was modified.  
Label: CLP Precautionary - Response information was modified.  
Label: CLP Supplemental Hazard Statements information was added.  
Section 03: Composition table % Column heading information was added.  
Section 3: Composition/ Information of ingredients table information was modified.  
Section 03: SCL table information was added.  
Section 03: Substance not applicable information was added.  
Section 04: First Aid - Symptoms and Effects (CLP) information was added.  
Section 04: Information on toxicological effects information was modified.  
Section 8: Occupational exposure limit table information was modified.  
Section 8: Personal Protection - Respiratory Information information was modified.  
Section 9: Evaporation Rate information information was deleted.  
Section 9: Explosive properties information information was deleted.  
Section 09: Kinematic Viscosity information information was added.  
Section 9: Melting point information information was modified.  
Section 9: Oxidising properties information information was deleted.  
Section 9: pH information information was deleted.  
Section 9: Property description for optional properties information was modified.  
Section 9: Vapour density value information was added.  
Section 9: Vapour density value information was deleted.  
Section 9: Viscosity information information was deleted.  
Section 11: Classification disclaimer information was modified.  
Section 11: No endocrine disruptor information available warning information was added.  
Section 12: 12.6. Endocrine Disrupting Properties information was added.  
Section 12: 12.7. Other adverse effects information was modified.  
Section 12: Component ecotoxicity information information was modified.  
Section 12: Contact manufacturer for more detail. information was deleted.  
Section 12: No Data text for mobility in soil information was added.  
Section 12: No endocrine disruptor information available warning information was added.  
Section 12: Persistence and Degradability information information was modified.  
Section 12: Bioaccumulative potential information information was modified.  
Section 14 Classification Code – Main Heading information was added.  
Section 14 Classification Code – Regulation Data information was added.  
Section 14 Control Temperature – Main Heading information was added.  
Section 14 Control Temperature – Regulation Data information was added.  
Section 14 Disclaimer Information information was added.

Section 14 Emergency Temperature – Main Heading information was added.  
Section 14 Emergency Temperature – Regulation Data information was added.  
Section 14 Hazard Class + Sub Risk – Main Heading information was added.  
Section 14 Hazard Class + Sub Risk – Regulation Data information was added.  
Section 14 Hazardous/Not Hazardous for Transportation information was added.  
Section 14 Multiplier – Main Heading information was added.  
Section 14 Multiplier – Regulation Data information was added.  
Section 14 Other Dangerous Goods – Main Heading information was added.  
Section 14 Other Dangerous Goods – Regulation Data information was added.  
Section 14 Packing Group – Main Heading information was added.  
Section 14 Packing Group – Regulation Data information was added.  
Section 14 Proper Shipping Name information was added.  
Section 14 Regulations – Main Headings information was added.  
Section 14 Segregation – Regulation Data information was added.  
Section 14 Segregation Code – Main Heading information was added.  
Section 14 Special Precautions – Main Heading information was added.  
Section 14 Special Precautions – Regulation Data information was added.  
Section 14 Transport Category – Main Heading information was added.  
Section 14 Transport Category – Regulation Data information was added.  
Section 14 Transport in bulk – Regulation Data information was added.  
Section 14 Transport in bulk according to Annex II of Marpol and the IBC Code – Main Heading information was added.  
Section 14 Tunnel Code – Main Heading information was added.  
Section 14 Tunnel Code – Regulation Data information was added.  
Section 14 UN Number Column data information was added.  
Section 14 UN Number information was added.  
Section 14: Transportation classification information was deleted.  
Section 15: Regulations - Inventories information was added.  
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

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

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