



## Safety Data Sheet

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<b>Transportation version number:</b>	7.00 (02/09/2019)		

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

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

#### 1.1. Product identifier

3M Scotch-Weld 1838 Epoxy Adhesive, Green

#### Product Identification Numbers

62-1838-0530-8

7000000810

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

##### Identified uses

Two- part epoxy 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

**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:**

10-3140-0, 10-3139-2

### TRANSPORTATION INFORMATION

62-1838-0530-8

#### Component 1

**ADR/RID:** UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION 375, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXEMPTION, (EPOXY RESIN), III, --.

## 3M Scotch-Weld 1838 Epoxy Adhesive, Green

**IMDG-CODE:** UN3082, NOT RESTRICTED AS PER IMDG CODE 2.10.2.7, MARINE POLLUTANT EXCEPTION, (EPOXY RESIN), III, IMDG-Code segregation code: NONE, EMS: --.

**ICAO/IATA:** UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION A197, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXCEPTION, (EPOXY RESIN), III.

### Component 2

**ADR/RID:** UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION 375, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXEMPTION, (POLYAMIDE RESIN), III, --.

**IMDG-CODE:** UN3082, NOT RESTRICTED AS PER IMDG CODE 2.10.2.7, MARINE POLLUTANT EXCEPTION, (POLYAMIDE RESIN), III, IMDG-Code segregation code: NONE, EMS: --.

**ICAO/IATA:** UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION A197, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXCEPTION, (POLYAMIDE RESIN), III.

## KIT LABEL

### 2.1. Classification of the substance or mixture

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

#### CLASSIFICATION:

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

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

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:

Triethylenetetramine; 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane; Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines

#### HAZARD STATEMENTS:

H318 Causes serious eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

#### PRECAUTIONARY STATEMENTS

<b>3M Scotch-Weld 1838 Epoxy Adhesive, Green</b>
--

**Prevention:**

P280B                                      Wear protective gloves and eye/face protection.  
P273                                      Avoid release to the environment.

**Response:**

P305 + P351 + P338                    IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310                                      Immediately call a POISON CENTRE or doctor/physician.  
P333 + P313                              If skin irritation or rash occurs: Get medical advice/attention.

**Disposal:**

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

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

H318                                      Causes serious eye damage.  
H317                                      May cause an allergic skin reaction.

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

P280B                                      Wear protective gloves and eye/face protection.

**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.  
P310                                      Immediately call a POISON CENTRE or doctor/physician.  
P333 + P313                              If skin irritation or rash occurs: Get medical advice/attention.

**Revision information:**

Kit: Component document group number(s) information was modified.  
Label: CLP Ingredients - kit components information was added.



## Safety Data Sheet

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<b>Document group:</b>	10-3139-2	<b>Version number:</b>	11.00
<b>Revision date:</b>	06/02/2020	<b>Supersedes date:</b>	24/04/2018
<b>Transportation version number:</b>	1.00 (22/06/2011)		

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

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

#### 1.1. Product identifier

3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part B

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

##### Identified uses

Structural adhesive.

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

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

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

### SECTION 2: Hazard identification

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

CLP REGULATION (EC) No 1272/2008

##### CLASSIFICATION:

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

For full text of H phrases, see Section 16.

#### 2.2. Label elements

CLP REGULATION (EC) No 1272/2008

##### SIGNAL WORD

WARNING.

**Symbols:**

GHS07 (Exclamation mark) |GHS09 (Environment) |

**Pictograms**



**Ingredients:**

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

**HAZARD STATEMENTS:**

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

**PRECAUTIONARY STATEMENTS**

**Prevention:**

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

**Response:**

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

**Disposal:**

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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**For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:**

**<=125 ml Hazard statements**

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

**Prevention:**

P280E	Wear protective gloves.
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**Response:**

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

None known.

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

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	216-823-5	01-2119456619-26	70 - 80	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317 Aquatic Chronic 2, H411
Kaolin	1332-58-7	310-194-1		20 - 30	Substance with a Community level exposure limit in the workplace
Clay (NJTS Reg No 04499600-7159)	Trade Secret			1 - 5	Substance not classified as hazardous
Calcium Carbonate	1317-65-3	215-279-6		1 - 5	Substance with a Community level exposure limit in the workplace
Titanium dioxide	13463-67-7	236-675-5	01-2119489379-17	< 1	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 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**

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**

## 3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part B

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.

### 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

**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part B**

**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>
Calcium Carbonate	1317-65-3	UK HSC	TWA(as inhalable dust):10 mg/m <sup>3</sup> ;TWA(as respirable dust):4 mg/m <sup>3</sup> ;TWA(Inhalable):10 mg/m <sup>3</sup> ;TWA(respirable):4 mg/m <sup>3</sup>	
DUST, INERT OR NUISANCE	1332-58-7	UK HSC	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.

**Derived no effect level (DNEL)**

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

**Predicted no effect concentrations (PNEC)**

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



**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part B**

epoxipropoxi)phenyl]propa ne			
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne		Marine water sediments	0.5 mg/kg d.w.
bis-[4-(2,3- epoxipropoxi)phenyl]propa ne		Sewage Treatment Plant	10 mg/l

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

## 8.2. Exposure controls

In addition, refer to the annex for more information.

### 8.2.1. Engineering controls

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

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

Indirect vented goggles.

#### *Applicable Norms/Standards*

Use eye protection conforming to EN 166

#### Skin/hand protection

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

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

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

#### *Applicable Norms/Standards*

Use gloves tested to EN 374

#### Respiratory protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

### 8.2.3. Environmental exposure controls

Refer to Annex

## SECTION 9: Physical and chemical properties

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

**Appearance**

<b>Physical state</b>	Liquid.
<b>Colour</b>	White
<b>Specific Physical Form:</b>	Viscous Liquid
<b>Odor</b>	Mild Epoxy
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>Not applicable.</i>
<b>Boiling point/boiling range</b>	>=148.9 °C
<b>Melting point</b>	<i>No data available.</i>
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Explosive properties</b>	Not classified
<b>Oxidising properties</b>	Not classified
<b>Flash point</b>	>=93.3 °C [ <i>Test Method:Closed Cup</i> ]
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Flammable Limits(LEL)</b>	<i>No data available.</i>
<b>Flammable Limits(UEL)</b>	<i>No data available.</i>
<b>Vapour pressure</b>	<i>No data available.</i>
<b>Relative density</b>	1.37 [ <i>Ref Std:WATER=1</i> ]
<b>Water solubility</b>	Negligible
<b>Solubility- non-water</b>	Nil
<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>No data available.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Viscosity</b>	400,000 mPa-s [ <i>@ 73</i> ] [ <i>Test Method:Brookfield</i> ]
<b>Density</b>	1.3 g/cm <sup>3</sup>

**9.2. Other information**

<b>EU Volatile Organic Compounds</b>	<i>No data available.</i>
<b>Molecular weight</b>	<i>No data available.</i>

**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**

<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**

This product may have a characteristic odour; however, no adverse health effects are anticipated.

#### **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**

<b>Name</b>	<b>Route</b>	<b>Species</b>	<b>Value</b>
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
Kaolin	Dermal		LD50 estimated to be > 5,000 mg/kg
Kaolin	Ingestion	Human	LD50 > 15,000 mg/kg
Clay (NJTS Reg No 04499600-7159)	Dermal		LD50 estimated to be > 5,000 mg/kg
Clay (NJTS Reg No 04499600-7159)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 12.6 mg/l
Clay (NJTS Reg No 04499600-7159)	Ingestion	Rat	LD50 > 5,000 mg/kg
Calcium Carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium Carbonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium Carbonate	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

**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part B****Skin Corrosion/Irritation**

Name	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Rabbit	Mild irritant
Kaolin	Professional judgement	No significant irritation
Clay (NJTS Reg No 04499600-7159)	Rat	No significant irritation
Calcium Carbonate	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Rabbit	Moderate irritant
Kaolin	Professional judgement	No significant irritation
Clay (NJTS Reg No 04499600-7159)	Rabbit	No significant irritation
Calcium Carbonate	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

**Skin Sensitisation**

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

**Respiratory Sensitisation**

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

**Germ Cell Mutagenicity**

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**

**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part B****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
Calcium Carbonate	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	prematng & during gestation

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium Carbonate	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-epoxipropoxy)phenyl]propane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Kaolin	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL NA	occupational exposure
Kaolin	Inhalation	pulmonary fibrosis	Not classified	Rat	NOAEL Not available	
Calcium Carbonate	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.**

**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.**

**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part B**

**12.1. Toxicity**

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Green Algae	Experimental	72 hours	EC50	>11 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Green Algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
Kaolin	1332-58-7	Water flea	Experimental	48 hours	LC50	>1,100 mg/l
Calcium Carbonate	1317-65-3	Rainbow trout	Estimated	96 hours	LC50	>100 mg/l
Calcium Carbonate	1317-65-3	Water flea	Estimated	48 hours	EC50	>100 mg/l
Calcium Carbonate	1317-65-3	Green algae	Estimated	72 hours	EC50	>100 mg/l
Calcium Carbonate	1317-65-3	Green algae	Estimated	72 hours	Effect Concentration 10%	>100 mg/l
Clay (NJTS Reg No 04499600-7159)	Trade Secret	Green algae	Estimated	72 hours	EC50	>100 mg/l
Clay (NJTS Reg No 04499600-7159)	Trade Secret	Water flea	Estimated	48 hours	EC50	>100 mg/l
Clay (NJTS Reg No 04499600-7159)	Trade Secret	Zebra Fish	Estimated	96 hours	LC50	>100 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 1/2)	Other methods
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
Kaolin	1332-58-7	Data not available - insufficient			N/A	
Calcium Carbonate	1317-65-3	Data not available - insufficient			N/A	
Clay (NJTS Reg No 04499600-7159)	Trade Secret	Estimated Biodegradation	28 days	BOD	3 % BOD/ThBOD	OECD 301D - Closed bottle test
Titanium dioxide	13463-67-7	Data not available - insufficient			N/A	

**12.3 : Bioaccumulative potential**

**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part B**

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
bis-[4-(2,3-epoxipropoxy)phenyl]propane	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	Other methods
Kaolin	1332-58-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Calcium Carbonate	1317-65-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Clay (NJTS Reg No 04499600-7159)	Trade Secret	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. 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**

ADR: UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN); 9; III; (-); M6.  
IATA: UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN); 9; III.  
IMDG: UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN); 9; III; Marine Pollutant: EPOXY RESIN; FA, SF.

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

**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 care.	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**

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

**Revision information:**

Formulation: Section 16: Annex information was modified.  
 Industrial Application of Adhesives: Section 16: Annex information was deleted.  
 Industrial Use of Adhesives: Section 16: Annex information was added.  
 CLP: Ingredient table information was modified.  
 Section 3: Composition/ Information of ingredients table information was modified.  
 Section 5: Hazardous combustion products table information was modified.  
 Section 7: Precautions safe handling information information was modified.  
 Section 8: DNEL table row information was modified.  
 Section 8: Occupational exposure limit table information was modified.  
 Section 8: PNEC table row information was modified.  
 Section 09: Color information was added.  
 Section 09: Odor information was added.  
 Sections 3 and 9: Odour, colour, grade information information was deleted.  
 Section 9: Vapour density value information was modified.  
 Section 11: Acute Toxicity table information was modified.  
 Section 11: Carcinogenicity Table 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: Respiratory Sensitization Table information was modified.  
 Section 11: Serious Eye Damage/Irritation Table information was modified.  
 Section 11: Skin Corrosion/Irritation Table information was modified.  
 Section 11: Skin Sensitization Table information was modified.  
 Section 11: Target Organs - Repeated Table information was modified.  
 Section 11: Target Organs - Single Table information was modified.



**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part B**

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 13: 13.1. Waste disposal note information was modified.  
 Section 13: Standard Phrase Category Waste GHS information was modified.  
 Section 14: Transportation classification information was modified.  
 Section 15: Carcinogenicity information information was modified.  
 Section 15: Regulations - Inventories information was deleted.  
 Section 16: UK disclaimer information was deleted.

**Annex**

<b>1. Title</b>	
<b>Substance identification</b>	bis-[4-(2,3-epoxipropoxy)phenyl]propane; EC No. 216-823-5; CAS Nbr 1675-54-3;
<b>Exposure Scenario Name</b>	Formulation
<b>Lifecycle Stage</b>	Use at industrial sites
<b>Contributing activities</b>	PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) ERC 02 -Formulation into mixture
<b>Processes, tasks and activities covered</b>	Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs.
<b>2. Operational conditions and risk management measures</b>	
<b>Operating Conditions</b>	<b>Physical state:</b> Liquid. <b>General operating conditions:</b> Duration of use: 8 hours/day; Emission days per year: <= 225 days per year;
<b>Risk management measures</b>	Under the operational conditions described above the following risk management measures apply: <b>General risk management measures:</b> <b>Human health:</b> Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. Refer to Section 8 of the SDS for specific glove material.; <b>Environmental:</b> None needed;
<b>Waste management measures</b>	Do not apply industrial sludge to natural soils; Prevent leaks and prevent soil / water pollution caused by leaks; Sludge should be incinerated, contained or reclaimed;
<b>3. Prediction of exposure</b>	
<b>Prediction of exposure</b>	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

<b>1. Title</b>	
<b>Substance identification</b>	bis-[4-(2,3-epoxipropoxy)phenyl]propane; EC No. 216-823-5; CAS Nbr 1675-54-3;
<b>Exposure Scenario Name</b>	Industrial Use of Adhesives
<b>Lifecycle Stage</b>	Use at industrial sites
<b>Contributing activities</b>	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC 13 -Treatment of articles by dipping and pouring

**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part B**

	ERC 05 -Use at industrial site leading to inclusion into/onto article
<b>Processes, tasks and activities covered</b>	Application of product with applicator gun. Transfers without dedicated controls, including loading, filling, dumping, bagging.
<b>2. Operational conditions and risk management measures</b>	
<b>Operating Conditions</b>	<b>Physical state:</b> Liquid. <b>General operating conditions:</b> Duration of use: 8 hours/day; Emission days per year: 220 days/year;
<b>Risk management measures</b>	Under the operational conditions described above the following risk management measures apply: <b>General risk management measures:</b> <b>Human health:</b> Wear chemically resistant gloves (tested to EN374) in combination with ‘basic’ employee training. Refer to Section 8 of the SDS for specific glove material.; <b>Environmental:</b> None needed;
<b>Waste management measures</b>	Do not apply industrial sludge to natural soils; Prevent discharge of undissolved substance to or recover from wastewater; Prevent leaks and prevent soil / water pollution caused by leaks; Sludge should be incinerated, contained or reclaimed;
<b>3. Prediction of exposure</b>	
<b>Prediction of exposure</b>	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

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

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



## Safety Data Sheet

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<b>Transportation version number:</b>	1.00 (22/06/2011)		

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

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

#### 1.1. Product identifier

3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part A

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

##### Identified uses

Structural adhesive.

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

**Address:** 3M 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 2 - Skin Irrit. 2; H315  
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 - 85
3,6-diazaoctanethylenediamin	112-24-3	203-950-6	1 - 10

**HAZARD STATEMENTS:**

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

**PRECAUTIONARY STATEMENTS**

**Prevention:**

P280B	Wear protective gloves and eye/face protection.
P273	Avoid release to the environment.

**Response:**

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

**Disposal:**

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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**For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:**

**<=125 ml Hazard statements**

H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.

**<=125 ml Precautionary statements**

**Prevention:**

P280B	Wear protective gloves and eye/face protection.
-------	---

**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.
--------------------	--

**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part A**

P310 Immediately call a POISON CENTRE or doctor/physician.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

**Notes on labelling**

Skin 2 applied based on vendor test data.

**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 - 85	Skin Irrit. 2, H315; Eye Dam. 1, H318; Skin Sens. 1A, H317; Aquatic Chronic 2, H411
Kaolin	1332-58-7	310-194-1		10 - 20	Substance with an occupational exposure limit
3,6-diazaoctanethylenediamin	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			1 - 5	Substance with an occupational exposure limit
Chromium (III) oxide	1308-38-9	215-160-9		<= 1	Substance with an occupational exposure limit
Titanium dioxide	13463-67-7	236-675-5		< 0.5	Substance with an occupational exposure limit

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

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

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

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

**Skin contact**

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

**Eye contact**

Immediately flush with large amounts of water 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

<u>Substance</u>	<u>Condition</u>
Amine compounds.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Oxides of nitrogen.	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.)

**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part A****7.2. Conditions for safe storage including any incompatibilities**

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>
Silicon dioxide	112945-52-5	UK HSC	TWA(as respirable dust):2.4 mg/m <sup>3</sup> ;TWA(as inhalable dust):6 mg/m <sup>3</sup>	
Chromium (III) oxide	1308-38-9	UK HSC	TWA(as Cr):0.5 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(respirable):4 mg/m <sup>3</sup> ;TWA(Inhalable):10 mg/m <sup>3</sup>	

UK HSC : UK Health and Safety Commission

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

**Biological limit values**

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

**Derived no effect level (DNEL)**

<b>Ingredient</b>	<b>Degradation Product</b>	<b>Population</b>	<b>Human exposure pattern</b>	<b>DNEL</b>
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	1.1 mg/kg bw/d
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	3.9 mg/m <sup>3</sup>

**Predicted no effect concentrations (PNEC)**

<b>Ingredient</b>	<b>Degradation Product</b>	<b>Compartment</b>	<b>PNEC</b>
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines		Agricultural soil	86.78 mg/kg d.w.
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines		Freshwater	0.00434 mg/l

**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part A**

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines		Freshwater sediments	434 mg/kg d.w.
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines		Marine water	0.000434 mg/l
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines		Marine water sediments	43.4 mg/kg d.w.
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines		Sewage Treatment Plant	3.84 mg/l

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

**8.2. Exposure controls**

In addition, refer to the annex for more information.

**8.2.1. Engineering controls**

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

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

**Eye/face protection**

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

Full face shield.

Indirect vented goggles.

*Applicable Norms/Standards*

Use eye/face protection conforming to EN 166

**Skin/hand protection**

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

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

**Material**

Polymer laminate

**Thickness (mm)**

No data available

**Breakthrough Time**

No data available

*Applicable Norms/Standards*

Use gloves tested to EN 374

**Respiratory protection**



## 3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part A

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

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

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

### *Applicable Norms/Standards*

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

### 8.2.3. Environmental exposure controls

Refer to Annex

## SECTION 9: Physical and chemical properties

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

#### Appearance

Physical state

Liquid.

Colour

Green

Specific Physical Form:

Paste

Odor

Slight Amine

Odour threshold

*No data available.*

pH

*No data available.*

Boiling point/boiling range

$\geq 121.1$  °C

Melting point

*Not applicable.*

Flammability (solid, gas)

Not applicable.

Explosive properties

Not classified

Oxidising properties

Not classified

Flash point

$\geq 93.3$  °C [*Test Method: Closed Cup*]

Autoignition temperature

*No data available.*

Flammable Limits(LEL)

*No data available.*

Flammable Limits(UEL)

*No data available.*

Vapour pressure

*Not applicable.*

Relative density

1.04 [*Ref Std: WATER=1*]

Water solubility

Nil

Solubility- non-water

*Not applicable.*

Partition coefficient: n-octanol/water

*No data available.*

Evaporation rate

*Not applicable.*

Vapour density

*Not applicable.*

Decomposition temperature

*No data available.*

Viscosity

300 - 1,000 Pa-s [*@ 23 °C*]

Density

1.04 g/cm<sup>3</sup>

### 9.2. Other information

EU Volatile Organic Compounds

*No data available.*

Molecular weight

*No data available.*

## 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 oxidising agents.

### 10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
------------------	------------------

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

### 11.1 Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

#### Inhalation

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

#### Skin contact

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

#### Eye contact

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.

#### Toxicological Data

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

#### Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Dermal	Rat	LD50 > 2,000 mg/kg

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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
3,6-diazaoctanethylenediamin	Dermal	Rabbit	LD50 550 mg/kg
3,6-diazaoctanethylenediamin	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
Chromium (III) oxide	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Chromium (III) oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.41 mg/l
Chromium (III) oxide	Ingestion	Rat	LD50 > 5,000 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
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	In vitro data	Irritant
Kaolin	Professional judgement	No significant irritation
3,6-diazaoctanethylenediamin	Rabbit	Corrosive
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
Chromium (III) oxide	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
3,6-diazaoctanethylenediamin	Rabbit	Corrosive
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
Chromium (III) oxide	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
3,6-diazaoctanethylenediamin	Guinea pig	Sensitising
Synthetic amorphous silica, fumed, crystalline-free	Human and animal	Not classified
Chromium (III) oxide	similar	Not classified

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	compounds	
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
Chromium (III) oxide	In vivo	Not mutagenic
Chromium (III) oxide	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
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
Chromium (III) oxide	Ingestion	Rat	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
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	pre mating 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	pre mating 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
Chromium (III) oxide	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	90 days
Chromium (III) oxide	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	90 days
Chromium (III) oxide	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	90 days

**3M(TM) Scotch-Weld(TM) Epoxy Adhesive 1838 Green Part A****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	
Chromium (III) oxide	Inhalation	respiratory system	Not classified	Rat	NOAEL 40 mg	

**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   bone, teeth, nails, and/or hair   hematopoietic system   nervous system   kidney and/or bladder   respiratory system   vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	6 weeks
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
Chromium (III) oxide	Inhalation	immune system   respiratory system   hematopoietic system   liver   kidney and/or bladder	Not classified	Rat	NOAEL 44 mg/m3	90 days
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.

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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	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	EC50	4.11 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
3,6-diazaoctanethylenediamin	112-24-3	Green Algae	Experimental	72 hours	EC50	27.4 mg/l
3,6-diazaoctanethylenediamin	112-24-3	Guppy	Experimental	96 hours	LC50	570 mg/l
3,6-diazaoctanethylenediamin	112-24-3	Water flea	Experimental	48 hours	EC50	37.4 mg/l
3,6-diazaoctanethylenediamin	112-24-3	Green Algae	Experimental	72 hours	NOEC	0.468 mg/l
3,6-diazaoctanethylenediamin	112-24-3	Water flea	Experimental	21 days	NOEC	2.86 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	Water flea	Experimental	24 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
Chromium (III) oxide	1308-38-9	Green algae	Estimated	72 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium (III) oxide	1308-38-9	Water flea	Estimated	48 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium (III) oxide	1308-38-9	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium (III) oxide	1308-38-9	Green algae	Estimated	72 hours	No tox obs at lmt of water sol	>100 mg/l
Chromium (III) oxide	1308-38-9	Water flea	Estimated	21 days	No tox obs at lmt of water sol	>100 mg/l
Chromium (III) oxide	1308-38-9	Zebra Fish	Estimated	30 days	No tox obs at lmt of water sol	>100 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

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Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l
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**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 availbl-insufficient			N/A	
3,6-diazaoctanethylenediamin	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 availbl-insufficient			N/A	
Chromium (III) oxide	1308-38-9	Data not availbl-insufficient			N/A	
Titanium dioxide	13463-67-7	Data not availbl-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
3,6-diazaoctanethylenediamin	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
Chromium (III) oxide	1308-38-9	Estimated BCF - Other		Bioaccumulation factor	800	Other methods
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. 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,

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stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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

### EU waste code (product as sold)

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

## SECTION 14: Transportation information

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

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

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

IATA: UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S; 9; III.

## 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:

Formulation: Section 16: Annex information was added.

CLP: Ingredient table information was modified.

Label: CLP Classification information was modified.

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



Section 5: Hazardous combustion products table information was modified.  
 Section 7: Precautions safe handling information information was modified.  
 Section 8: 8.2. Exposure controls information information was added.  
 Section 8: 8.2.3. Environmental exposure controls information information was added.  
 Section 8: DNEL table row information was added.  
 Section 8: Eye/face protection information information was modified.  
 Section 8: Occupational exposure limit table information was modified.  
 OEL Reg Agency Desc information was modified.  
 Section 8: PNEC table row information was added.  
 Section 8: Respiratory protection - recommended respirators information information was modified.  
 Section 09: Color information was added.  
 Section 09: Odor information was added.  
 Sections 3 and 9: Odour, colour, grade information information was deleted.  
 Section 10: Conditions to avoid physical property information was modified.  
 Section 10: Materials to avoid physical property information was modified.  
 Section 11: Acute Toxicity table information was modified.  
 Section 11: Carcinogenicity Table 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: Skin Sensitization Table information was modified.  
 Section 11: Target Organs - Repeated Table information was modified.  
 Section 11: Target Organs - Single Table information was modified.  
 Section 12: Component ecotoxicity information information was modified.  
 Section 12: Persistence and Degradability information information was modified.  
 Section 12: Biocumulative potential information information was modified.  
 Section 13: 13.1. Waste disposal note information was modified.  
 Section 14: Transportation classification information was modified.  
 Section 15: Label remarks and EU Detergent information was modified.  
 Section 15: Regulations - Inventories information was deleted.  
 Annex: Prediction of exposure statement information was added.  
 Sectio 16: UK disclaimer information was deleted.

## Annex

<b>1. Title</b>	
<b>Substance identification</b>	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines; CAS Nbr 68410-23-1;
<b>Exposure Scenario Name</b>	Formulation
<b>Lifecycle Stage</b>	Formulation or re-packing
<b>Contributing activities</b>	PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) ERC 02 -Formulation into mixture
<b>Processes, tasks and activities covered</b>	Open sampling. Transfer of substance/mixture with dedicated engineering controls.
<b>2. Operational conditions and risk management measures</b>	
<b>Operating Conditions</b>	<b>Physical state:</b> Liquid. <b>General operating conditions:</b> Duration of use: 8 hours/day; Emission days per year: 300 days/year; Indoor use with Local Exhaust Ventilation;

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<b>Risk management measures</b>	Under the operational conditions described above the following risk management measures apply: <b>General risk management measures:</b> <b>Human health:</b> Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; <b>Environmental:</b> None needed;
<b>Waste management measures</b>	Avoid release to the environment. Refer to special instructions / safety data sheet.;
<b>3. Prediction of exposure</b>	
<b>Prediction of exposure</b>	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

<b>1. Title</b>	
<b>Substance identification</b>	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines; CAS Nbr 68410-23-1;
<b>Exposure Scenario Name</b>	Formulation
<b>Lifecycle Stage</b>	Formulation or re-packing
<b>Contributing activities</b>	PROC 04 -Chemical production where opportunity for exposure arises PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 13 -Treatment of articles by dipping and pouring ERC 05 -Use at industrial site leading to inclusion into/onto article
<b>Processes, tasks and activities covered</b>	Application of product with applicator gun. Mixing operations (open systems). Transfer of substance/mixture with dedicated engineering controls.
<b>2. Operational conditions and risk management measures</b>	
<b>Operating Conditions</b>	<b>Physical state:</b> Liquid. <b>General operating conditions:</b> Duration of use: 8 hours/day; Emission days per year: 300 days/year; Indoor use with Local Exhaust Ventilation;
<b>Risk management measures</b>	Under the operational conditions described above the following risk management measures apply: <b>General risk management measures:</b> <b>Human health:</b> Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; <b>Environmental:</b> None needed;
<b>Waste management measures</b>	Avoid release to the environment. Refer to special instructions / safety data sheet.; Do not apply industrial sludge to natural soils;
<b>3. Prediction of exposure</b>	
<b>Prediction of exposure</b>	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

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

volume tracking, and potential substance registration.

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