



## Safety Data Sheet

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**Revision date:** 18/12/2015 **Supersedes date:** 16/12/2015  
**Transportation version number:** 7.02 (21/01/2016)

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™ EC-9323-2 B/A Black Kit

#### Product Identification Numbers

FS-9100-4190-4 FS-9100-5493-1 FS-9100-5494-9 FS-9100-5495-6 FS-9100-5497-2  
FS-9100-5498-0

#### 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

**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:**

19-7921-0, 19-7919-4

### TRANSPORTATION INFORMATION

FS-9100-4190-4

**ADR/RID:** UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., (3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), (2,4,6-TRIS( (DIMETHYLAMINO)METHYL) PHENOL), 8, II , (E), ADR Classification Code: C8.

**IMDG-CODE:** UN3263, CORROSIVE SOLID,BASIC,ORGANIC,N.O.S., (3,3'-

## 3M™ Scotch-Weld™ EC-9323-2 B/A Black Kit

OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), (2,4,6-TRIS( (DIMETHYLAMINO)METHYL) PHENOL), 8., II ,  
IMDG-Code segregation code: 18- ALKALIS, EMS: FA,SB.

**ICAO/IATA:** UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., (3,3'-  
OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), (2,4,6-TRIS( (DIMETHYLAMINO)METHYL) PHENOL), 8., II .

FS-9100-5493-1, FS-9100-5494-9, FS-9100-5495-6

**ADR/RID:** UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., LIMITED QUANTITY, (3,3'-  
OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), (2,4,6-TRIS( (DIMETHYLAMINO)METHYL) PHENOL), 8, II , (E),  
ADR Classification Code: C8.

**IMDG-CODE:** UN3263, CORROSIVE SOLID,BASIC,ORGANIC,N.O.S., (3,3'-  
OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), (2,4,6-TRIS( (DIMETHYLAMINO)METHYL) PHENOL), 8., II ,  
IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA,SB.

**ICAO/IATA:** UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., (3,3'-  
OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), (2,4,6-TRIS( (DIMETHYLAMINO)METHYL) PHENOL), 8., II .

FS-9100-5497-2

### Component 1

**ADR/RID:** UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., LIMITED QUANTITY, (3,3'-  
OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), (2,4,6-TRIS( (DIMETHYLAMINO)METHYL) PHENOL), 8, II , (E),  
ADR Classification Code: C8.

**IMDG-CODE:** UN3263, CORROSIVE SOLID,BASIC,ORGANIC,N.O.S., (3,3'-  
OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), (2,4,6-TRIS( (DIMETHYLAMINO)METHYL) PHENOL), 8., II ,  
IMDG-Code segregation code: 18- ALKALIS, LIMITED QUANTITY, EMS: FA,SB.

**ICAO/IATA:** UN3263, CORROSIVE SOLID, BASIC, ORGANIC, N.O.S., (3,3'-  
OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)), (2,4,6-TRIS( (DIMETHYLAMINO)METHYL) PHENOL), 8., II .

### Component 2

**ADR/RID:** NOT RESTRICTED FOR ROAD (ADR/RID), (--).

**IMDG-CODE:** not restricted according to IMDG-Code, IMDG-Code segregation code: NONE.

**ICAO/IATA:** NOT RESTRICTED FOR AIR SHIPMENT.

FS-9100-5498-0

## 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 1B - Skin Corr. 1B; H314

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

DANGER.

#### Symbols:

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

**Pictograms**



**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:**

- P260B Do not breathe dust.
- 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/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.

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

**Revision information:**

Section 1: Product identification numbers information was modified.



## Safety Data Sheet

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<b>Revision date:</b>	27/04/2016	<b>Supersedes date:</b>	18/12/2015
<b>Transportation version number:</b>	1.00 (23/03/2011)		

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™ Scotch-Weld™ EC-9323-2 B/A Black, (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 1B - Skin Corr. 1B; H314  
Skin Sensitization, Category 1 - Skin Sens. 1; H317

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) |

**Pictograms**



**Ingredients:**

Ingredient	CAS Nbr	% by Wt
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	40 - 60
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	10 - 30
2-Piperazin-1-ylethylamine	140-31-8	<= 1

**HAZARD STATEMENTS:**

H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.

**PRECAUTIONARY STATEMENTS**

**Prevention:**

P260B Do not breathe dust.  
 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/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.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

49% of the mixture consists of components of unknown acute oral toxicity.  
 51% of the mixture consists of components of unknown acute dermal toxicity.  
 92% of the mixture consists of components of unknown acute inhalation toxicity.  
 Contains 51% of components with unknown hazards to the aquatic environment.

**2.3. Other hazards**

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines. May cause chemical gastrointestinal burns.

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

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1		40 - 60	Skin Irrit. 2, H315; Eye Dam. 1, H318; Skin Sens. 1, H317 (Self Classified)
Amine Terminated Butadiene Acrylonitrile Polymer	Trade Secret		10 - 30	
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	224-207-2	10 - 30	Skin Sens. 1, H317 (Vendor) Skin Corr. 1B, H314 (Self)

**3M™ Scotch-Weld™ EC-9323-2 B/A Black, (Part A)**

				Classified)
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	202-013-9	7 - 13	Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319 (CLP)
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		5 - 10	
Bis[(dimethylamino)methyl]phenol	71074-89-0	275-162-0	1 - 5	Acute Tox. 4, H302; Skin Corr. 1B, H314 (Self Classified)
Titanium dioxide (REACH Reg. No.:01-2119489379-17)	13463-67-7	236-675-5	1 - 5	
2-Piperazin-1-ylethylamine	140-31-8	205-411-0	<= 1	Acute Tox. 3, H311; Acute Tox. 4, H302; Skin Corr. 1B, H314; Skin Sens. 1B, H317; Aquatic Chronic 3, H412 (CLP)
Toluene	108-88-3	203-625-9	<= 1	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Repr. 2, H361d; STOT SE 3, H336; STOT RE 2, H373 (CLP) Aquatic Chronic 3, H412 (Vendor) Eye Irrit. 2, H319 (Self Classified)

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

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

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

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

**Skin contact**

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

**Eye contact**

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

**If swallowed**

Rinse mouth. Do not induce vomiting. Get immediate medical attention.

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

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

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

### Condition

During combustion.  
During combustion.  
During combustion.  
During combustion.

## 5.3. Advice for fire-fighters

No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

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

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

### 6.2. Environmental precautions

Avoid release to the environment.

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

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

### 6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

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. 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. Store away from acids.

### 7.3. Specific end use(s)

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

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
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**3M™ Scotch-Weld™ EC-9323-2 B/A Black, (Part A)**

Toluene	108-88-3	UK HSC	TWA: 191 mg/m <sup>3</sup> (50 ppm); STEL: 384 mg/m <sup>3</sup> (100 ppm)	Skin Notation
Titanium dioxide	13463-67-7	UK HSC	TWA(Inhalable):10 mg/m <sup>3</sup> ;TWA(respirable):4 mg/m <sup>3</sup>	
Silicon dioxide	67762-90-7	UK HSC	TWA(as inhalable dust):6 mg/m <sup>3</sup> ;TWA(as respirable dust):2.4 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.

**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.

**Skin/hand protection**

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

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

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

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

**Respiratory protection**

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

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

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

**SECTION 9: Physical and chemical properties**



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

Physical state	Solid.
Specific Physical Form:	Paste
Appearance/Odour	Off-white paste, amine odour.
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	$\geq 139$ °C
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	$\geq 139$ °C [ <i>Test Method: Closed Cup</i> ]
Autoignition temperature	<i>No data available.</i>
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Relative density	0.97 - 1.1 [ <i>Ref Std: WATER=1</i> ]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	Negligible
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	70 - 155 Pa-s [ <i>@ 23 °C</i> ] [ <i>Test Method: Brookfield</i> ]
Density	0.97 - 1.1 g/cm <sup>3</sup> [ <i>@ 20 °C</i> ]

### 9.2. Other information

Percent volatile	$\leq 1$ % weight
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

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

### 10.5 Incompatible materials

Strong acids.

### 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

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

##### Eye contact

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

##### Ingestion

May be harmful if swallowed.

Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen. May cause additional health effects (see below).

#### Additional Health Effects:

##### Reproductive/Developmental Toxicity:

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

##### Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

#### Additional information:

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

#### Toxicological Data

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

#### Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE2,000 - 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 ATE2,000 - 5,000 mg/kg
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Dermal	Rabbit	LD50 2,500 mg/kg

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3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Rat	LD50 3,160 mg/kg
Amine Terminated Butadiene Acrylonitrile Polymer	Dermal	Rabbit	LD50 > 3,000 mg/kg
Amine Terminated Butadiene Acrylonitrile Polymer	Ingestion	Rat	LD50 > 15,300 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	Rat	LD50 1,280 mg/kg
2,4,6-Tris(dimethylaminomethyl)phenol	Ingestion	Rat	LD50 1,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Bis[(dimethylamino)methyl]phenol	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg
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
2-Piperazin-1-ylethylamine	Dermal	Rabbit	LD50 865 mg/kg
2-Piperazin-1-ylethylamine	Ingestion	Rat	LD50 1,470 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapour (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Rabbit	Irritant
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Rabbit	Corrosive
2,4,6-Tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Bis[(dimethylamino)methyl]phenol	similar compounds	Corrosive
Titanium dioxide	Rabbit	No significant irritation
2-Piperazin-1-ylethylamine	Rabbit	Corrosive
Toluene	Rabbit	Irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	similar health hazards	Corrosive
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	similar health hazards	Corrosive
2,4,6-Tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Bis[(dimethylamino)methyl]phenol	similar compounds	Corrosive
Titanium dioxide	Rabbit	No significant irritation
2-Piperazin-1-ylethylamine	Rabbit	Corrosive
Toluene	Rabbit	Moderate irritant

**Skin Sensitisation**

Name	Species	Value
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Guinea pig	Sensitising
Amine Terminated Butadiene Acrylonitrile Polymer	Guinea	Some positive data exist, but the data are not

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	pig	sufficient for classification
2,4,6-Tris(dimethylaminomethyl)phenol	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not sensitising
Titanium dioxide	Human and animal	Not sensitising
2-Piperazin-1-ylethylamine	Guinea pig	Sensitising
Toluene	Guinea pig	Not sensitising

**Respiratory Sensitisation**

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

**Germ Cell Mutagenicity**

Name	Route	Value
2,4,6-Tris(dimethylaminomethyl)phenol	In Vitro	Not mutagenic
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
2-Piperazin-1-ylethylamine	In vivo	Not mutagenic
2-Piperazin-1-ylethylamine	In Vitro	Some positive data exist, but the data are not sufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Siloxanes and Silicones, di-Me, reaction products with silica	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.
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification

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

Name	Route	Value	Species	Test result	Exposure Duration
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
2-Piperazin-1-ylethylamine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 598 mg/kg/day	prematuring & during gestation
2-Piperazin-1-ylethylamine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 409 mg/kg/day	32 days
2-Piperazin-1-ylethylamine	Ingestion	Not toxic to development	Rat	NOAEL 899 mg/kg/day	prematuring & during

**3M™ Scotch-Weld™ EC-9323-2 B/A Black, (Part A)**

Toluene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	gestation occupational exposure
Toluene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2,4,6-Tris(dimethylaminomethyl)phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2-Piperazin-1-ylethylamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	skin   liver   nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	28 days
2,4,6-Tris(dimethylaminomethyl)phenol	Dermal	auditory system   hematopoietic system   eyes	All data are negative	Rat	NOAEL 125 mg/kg/day	28 days
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system   silicosis	All data are negative	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	All data are negative	Human	NOAEL Not available	occupational exposure
2-Piperazin-1-ylethylamine	Ingestion	heart   endocrine system   hematopoietic system   liver   nervous system   kidney and/or bladder	All data are negative	Rat	NOAEL 598 mg/kg/day	28 days
Toluene	Inhalation	auditory system   nervous system   eyes   olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the	Rat	LOAEL 2.3	15 months

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			data are not sufficient for classification		mg/l	
Toluene	Inhalation	heart   liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system   vascular system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	4 weeks

**Aspiration Hazard**

Name	Value
Toluene	Aspiration hazard

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

**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 Nbr	Organism	Type	Exposure	Test endpoint	Test result
Toluene	108-88-3	Diatom	Experimental	72 hours	NOEC	10 mg/l
Toluene	108-88-3	Water flea	Experimental	7 days	NOEC	0.74 mg/l
Toluene	108-88-3	Sheepshead Minnow	Experimental	28 days	NOEC	3.2 mg/l
Toluene	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
Toluene	108-88-3	Green Algae	Experimental	72 hours	EC50	12.5 mg/l

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Toluene	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
Toluene	108-88-3	Fish other	Experimental	96 hours	LC50	6.41 mg/l
Toluene	108-88-3	Grass Shrimp	Experimental	48 hours	EC50	15.5 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Zebra Fish	Experimental	96 hours	LC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Sheepshead Minnow	Experimental	96 hours	LC50	>240 mg/l
Titanium dioxide	13463-67-7	Fish	Experimental	30 days	NOEC	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	30 days	NOEC	3 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Golden Orfe	Experimental	96 hours	LC50	368 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Water flea	Experimental	48 hours	EC50	32 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Green Algae	Experimental	72 hours	NOEC	31 mg/l
2-Piperazin-1-ylethylamine	140-31-8	Green Algae	Experimental	72 hours	EC50	>1,000 mg/l
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethylenoxy)bis(propylamine)	68911-25-1		Data not available or insufficient for classification			
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Common Carp	Experimental	96 hours	LC50	175 mg/l
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Grass Shrimp	Experimental	96 hours	LC50	718 mg/l
Bis[(dimethylamino)methyl]phenol	71074-89-0		Data not available or insufficient for classification			
3,3'-Oxybis(ethylenoxy)bis(propylamine)	4246-51-9	Water flea	Experimental	48 hours	EC50	220 mg/l
3,3'-Oxybis(ethylenoxy)bis(propylamine)	4246-51-9	Green algae	Experimental	72 hours	EC50	>500 mg/l
3,3'-Oxybis(ethylenoxy)bis(propylamine)	4246-51-9	Golden Orfe	Experimental	96 hours	LC50	>1,000 mg/l

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eoxy)bis(propylamine)						
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Green algae	Experimental	72 hours	Effect Concentration 10%	5.4 mg/l
Amine Terminated Butadiene Acrylonitrile Polymer	Trade Secret		Data not available or insufficient for classification			

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Toluene	108-88-3	Experimental Biodegradation	14 days	BOD	100 % weight	OECD 301C - MITI test (I)
2-Piperazin-1-ylethylamine	140-31-8	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Experimental Biodegradation	28 days	BOD	4 % weight	OECD 301D - Closed bottle test
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Experimental Biodegradation	25 days	CO2 evolution	-8 % weight	OECD 301B - Modified sturm or CO2
Bis[(dimethylamino)methyl]phenol	71074-89-0	Estimated Biodegradation	28 days	BOD	20 % weight	OECD 301C - MITI test (I)
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Amine Terminated Butadiene Acrylonitrile Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	Other methods



**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2-Piperazin-1-ylethylamine	140-31-8	Experimental Bioconcentration		Log Kow	0.3	Other methods
Bis[(dimethylamino)methyl]phenol	71074-89-0	Estimated Bioconcentration		Log Kow	-2.34	Estimated: Octanol-water partition coefficient
2,4,6-Tris(dimethylaminomethyl)phenol	90-72-2	Experimental Bioconcentration		Log Kow	-0.66	Other methods
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Amine Terminated Butadiene Acrylonitrile Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation factor	90	Other methods
Titanium dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	9.6	Other methods
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Estimated Bioconcentration		Log Kow	-1.46	Estimated: Octanol-water partition coefficient

**12.4. Mobility in soil**

Please contact manufacturer for more details

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

No information available at this time, contact manufacturer for more details

**12.6. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

## 3M™ Scotch-Weld™ EC-9323-2 B/A Black, (Part A)

See Section 11.1 Information on toxicological effects

Dispose of completely cured (or polymerised) 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. If no other disposal options are available, waste product that has been completely cured or polymerised may be placed in a landfill properly designed for industrial waste. 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

IATA: UN3263; Corrosive Solid, Basic, Organic, N.O.S. (3,3'-Oxybis(Ethyleneoxy)Bis(Propylamine)) (2,4,6-Tris(Dimethylamino)Methyl) Phenol); 8; II.

ADR: UN3263; Corrosive Solid, Basic, Organic, N.O.S. (3,3'-Oxybis(Ethyleneoxy)Bis(Propylamine)) (2,4,6-Tris(Dimethylamino)Methyl) Phenol); 8; II; (E); C8.

IMDG: UN3263 Corrosive Solid, Basic, Organic, N.O.S. (3,3'-oxybis(ethyleneoxy)bis(propylamine))(2,4,6-tris((dimethylamino)methyl)phenol); 8; II; 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
Toluene	108-88-3	Gr. 3: Not classifiable	International Agency for Research on Cancer

#### Global inventory status

Contact 3M for more information. The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA.

### 15.2. Chemical Safety Assessment

Not applicable

## SECTION 16: Other information

### List of relevant H statements

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

### Revision information:

CLP: Ingredient table information was modified.

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

Section 11: Acute Toxicity table 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.

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.

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



## Safety Data Sheet

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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™ EC-9323-2 B/A Black, 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	% by Wt
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	45 - 65
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	10 - 30

**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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17% of the mixture consists of components of unknown acute oral toxicity.

17% of the mixture consists of components of unknown acute dermal toxicity.

Contains 17% of components with unknown hazards to the aquatic environment.

**2.3. Other hazards**

None known.

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

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	NLP 500-033-5	45 - 65	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 2, H411 (CLP)

**3M Scotch-Weld™ EC-9323-2 B/A Black, Part B**

1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	238-098-4	10 - 30	Skin Sens. 1, H317 (Self Classified)
Methylmethacrylate/Butadiene/Styrene copolymer	Trade Secret		10 - 20	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		1 - 5	
Glass, oxide, chemicals	65997-17-3	266-046-0	1 - 5	
Titanium dioxide (REACH Reg. No.:01-2119489379-17)	13463-67-7	236-675-5	1 - 5	
Carbon black (REACH Reg. No.:01-2119384822-32)	1333-86-4	215-609-9	1 - 5	
Silane, triethoxy[3-(oxiranylmethoxy)propyl]-	2602-34-8	220-011-6	<= 1.5	
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane (REACH Reg. No.:01-2119513212-58)	2530-83-8	219-784-2	<= 1.5	Eye Dam. 1, H318 (Self Classified)

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

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

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

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

**Skin contact**

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

**Eye contact**

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

**If swallowed**

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

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

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 carbon dioxide or dry chemical extinguisher to extinguish.

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

None inherent in this product.

**Hazardous Decomposition or By-Products**

**Substance**

Aldehydes.  
Hydrocarbons.  
Carbon monoxide.  
Carbon dioxide.

**Condition**

During combustion.  
During combustion.  
During combustion.  
During combustion.

**5.3. Advice for fire-fighters**

No special protective actions for fire-fighters are anticipated.

**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. 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. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

**6.4. Reference to other sections**

Refer to Section 8 and Section 13 for more information

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Do not handle until all safety precautions have been read and understood. 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.) Use personal protective equipment (eg. gloves, respirators...) as required.

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

Store away from heat. 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>
Carbon black	1333-86-4	UK HSC	TWA: 3.5 mg/m <sup>3</sup> ; STEL: 7 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>	
Glass, oxide, chemicals	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m <sup>3</sup>	
Silicon dioxide	67762-90-7	UK HSC	TWA(as inhalable dust):6 mg/m <sup>3</sup> ;TWA(as respirable dust):2.4 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.

### **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.

#### **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

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

#### **Respiratory protection**

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

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

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



## SECTION 9: Physical and chemical properties

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

Physical state	Solid.
Specific Physical Form:	Paste
Appearance/Odour	Black thick paste, epoxy odour.
Odour threshold	<i>No data available.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	>=93.4 °C
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	>=93.4 °C [ <i>Test Method: Closed Cup</i> ]
Autoignition temperature	<i>No data available.</i>
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Relative density	0.97 - 1.1 [ <i>Ref Std: WATER=1</i> ]
Water solubility	Nil
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	Negligible
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	300 - 900 Pa-s [ <i>@ 23 °C</i> ] [ <i>Test Method: Brookfield</i> ]
Density	0.97 - 1.1 g/cm <sup>3</sup> [ <i>@ 20 °C</i> ]

### 9.2. Other information

Percent volatile	<=1 % weight
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\* The values noted with an asterisk (\*) in the above table are representative values based on testing of raw materials and selected products. Additionally, a material's characteristics may change depending upon the process and conditions of use at a facility, including further changes in particle size, or mixture with other materials. In order to obtain specific data for the material, we recommend the user conduct characterisation testing based on the use factors at the specific facility.

## 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

Strong acids.  
Strong oxidising agents.

**10.6 Hazardous decomposition products****Substance****Condition**

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. Vapours released during curing may cause irritation of the respiratory system: 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**

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision. Vapours released during curing may cause 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.

**Additional Health Effects:****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**

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
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Rat	LD50 > 1,000 mg/kg
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Dermal	Rabbit	LD50 2,500 mg/kg
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Ingestion	Rat	LD50 2,450 mg/kg

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Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
Glass, oxide, chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Glass, oxide, chemicals	Ingestion		LD50 estimated to be 2,000 - 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
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Dermal	Rabbit	LD50 4,000 mg/kg
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Rat	LD50 7,010 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Mild irritant
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Professional judgement	Mild irritant
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation
Glass, oxide, chemicals	Professional judgement	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Rabbit	Moderate irritant
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Professional judgement	Mild irritant
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation
Glass, oxide, chemicals	Professional judgement	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Rabbit	Corrosive

**Skin Sensitisation**

Name	Species	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Human and animal	Sensitising
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	similar	Sensitising

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	compounds	
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not sensitising
Titanium dioxide	Human and animal	Not sensitising
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Guinea pig	Some positive data exist, but the data are not sufficient for classification

**Respiratory Sensitisation**

Name	Species	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Human	Some positive data exist, but the data are not sufficient for classification

**Germ Cell Mutagenicity**

Name	Route	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In vivo	Not mutagenic
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
Glass, oxide, chemicals	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
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	In vivo	Not mutagenic
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.
Glass, oxide, chemicals	Inhalation	Multiple animal species	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.
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Dermal	Mouse	Not carcinogenic

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

Name	Route	Value	Species	Test result	Exposure Duration
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation

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epoxypropane					
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 3,000 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
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Carbon black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Glass, oxide, chemicals	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	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	All data are negative	Human	NOAEL Not available	occupational exposure

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[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	Ingestion	heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   kidney and/or bladder   respiratory system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
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**Aspiration Hazard**

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

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

**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 Nbr	Organism	Type	Exposure	Test endpoint	Test result
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Green algae	Estimated	72 hours	NOEC	29 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Ricefish	Estimated	96 hours	LC50	13 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Water flea	Estimated	48 hours	EC50	22 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Green algae	Estimated	72 hours	EC50	>93 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Common Carp	Experimental	96 hours	LC50	55 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Water flea	Experimental	21 days	NOEC	>=100 mg/l
[3-(2,3-Epoxypropoxy)	2530-83-8	Green algae	Experimental	96 hours	NOEC	130 mg/l

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propyl] trimethoxysilane						
[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	EC50	350 mg/l
[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane	2530-83-8	Water flea	Experimental	48 hours	EC50	473 mg/l
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Ricefish	Experimental	96 hours	LC50	1.41 mg/l
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Water flea	Experimental	21 days	NOEC	0.3 mg/l
Carbon black	1333-86-4		Data not available or insufficient for classification			
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		Data not available or insufficient for classification			
Glass, oxide, chemicals	65997-17-3		Data not available or insufficient for classification			
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Crustacea other	Experimental	96 hours	EC50	>300 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	30 days	NOEC	3 mg/l
Titanium dioxide	13463-67-7	Fish	Experimental	30 days	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Sheepshead Minnow	Experimental	96 hours	LC50	>240 mg/l
[3-(2,3-Epoxypropoxy) propyl]	2530-83-8	Green algae	Experimental	96 hours	EC50	350 mg/l

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trimethoxysilane						
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green Algae	Experimental	96 hours	NOEC	130 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Crustacea other	Experimental	48 hours	LC50	324 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Green algae	Estimated	72 hours	NOEC	29 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Green algae	Estimated	72 hours	EC50	>93 mg/l
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Water flea	Estimated	21 days	NOEC	0.3 mg/l
Glass, oxide, chemicals	65997-17-3	Water flea	Experimental	72 hours	EC50	>1,000 mg/l
Glass, oxide, chemicals	65997-17-3	Zebra Fish	Experimental	96 hours	LC50	>1,000 mg/l
Glass, oxide, chemicals	65997-17-3	Green algae	Experimental	72 hours	NOEC	>=1,000 mg/l
Glass, oxide, chemicals	65997-17-3	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Zebra Fish	Experimental	96 hours	LC50	>10,000 mg/l
Silane, triethoxy[3-(oxiranylmethoxy)propyl]-	2602-34-8		Data not available or insufficient for classification			

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Estimated Hydrolysis		Hydrolytic half-life	7 days (t 1/2)	Other methods
[3-(2,3-Epoxypropoxy)	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life	6.5 hours (t 1/2)	Other methods



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propyl] trimethoxysilane						
Titanium dioxide	13463-67-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Laboratory Hydrolysis		Hydrolytic half-life	<2 days (t 1/2)	Other methods
Silane, triethoxy[3-(oxiranylmethoxy)propyl]-	2602-34-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glass, oxide, chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Estimated Biodegradation	28 days	CO2 evolution	64 % weight	OECD 301B - Modified sturm or CO2
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Estimated Biodegradation	28 days	BOD	4 % weight	OECD 301C - MITI test (I)
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 % weight	Other methods
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Estimated Hydrolysis		Hydrolytic half-life	<2 days (t 1/2)	Other methods
4,4'-Isopropylidene diphenol, oligomeric reaction products with	25068-38-6	Laboratory Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)

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1-chloro-2,3-epoxypropane						
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glass, oxide, chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
[3-(2,3-Epoxypropoxy) propyl] trimethoxysilane	2530-83-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,4-Bis[(2,3-epoxypropoxy) methyl]cyclohexane	14228-73-0	Estimated BCF - Other		Bioaccumulation factor	3	Estimated: Bioconcentration factor
Titanium dioxide	13463-67-7	Experimental BCF - Other	42 days	Bioaccumulation factor	9.6	Other methods
4,4'-Isopropylidene diphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	25068-38-6	Laboratory BCF - Other	28 days	Bioaccumulation factor	<42	Other methods
Titanium dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	9.6	Other methods
4,4'-Isopropylidene diphenol,	25068-38-6	Experimental BCF-Carp	28 days	Bioaccumulation factor	<=42	Other methods

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oligomeric reaction products with 1-chloro-2,3-epoxypropane						
Silane, triethoxy[3-(oxiranylmethoxy)propyl]-	2602-34-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Estimated Bioconcentration		Bioaccumulation factor	3	Estimated: Bioconcentration factor

**12.4. Mobility in soil**

Please contact manufacturer for more details

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

No information available at this time, contact manufacturer for more details

**12.6. Other adverse effects**

No information available.

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

See Section 11.1 Information on toxicological effects

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

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

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

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

**SECTION 14: Transportation information**

ADR/IATA/IMDG: Not restricted for transport.

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

**3M Scotch-Weld™ EC-9323-2 B/A Black, Part B**

<b><u>Ingredient</u></b>	<b><u>CAS Nbr</u></b>	<b><u>Classification</u></b>	<b><u>Regulation</u></b>
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	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 China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the chemical notification requirements of TSCA.

**15.2. Chemical Safety Assessment**

Not applicable

**SECTION 16: Other information****List of relevant H statements**

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

**Revision information:**

Section 1: Product name information was modified.

CLP: Ingredient table information was modified.

Label: CLP Percent Unknown information was added.

Label: CLP Percent Unknown information was modified.

Label: CLP Supplemental Hazard Statements information was deleted.

Section 3 and Section 9: General physical form information information was modified.

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

Section 6: Accidental release clean-up information information was modified.

Section 8: Personal Protection - Skin/body information information was modified.

Section 8: Personal Protection - Skin/hand information information was modified.

Section 9: Additional Statement information was added.

Section 9: Flammability (solid, gas) information information was added.

Section 9: Flammability (solid, gas) information information was deleted.

Sections 3 and 9: Odour, colour, grade information information was modified.

Section 9: Solubility (non-water) information was deleted.

Section 9: Solubility as text (non-water) information was added.

Section 10: Conditions to avoid physical property information was modified.

Section 11: Acute Toxicity table information was modified.

Section 11: Health Effects - Eye information information was modified.

Section 11: Health Effects - Inhalation information 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: Standard Phrase Category Waste GHS information was modified.

Section 15: Regulations - Inventories information was modified.

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

information was modified.

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)**