



## 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™ Structural Core Splice Film AF 3074 FST

#### Product Identification Numbers

UU-0089-0533-1      UU-0089-0537-2

7100137386      7100137387

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

##### Identified uses

Adhesive

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

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

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazard identification

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

CLP REGULATION (EC) No 1272/2008

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

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

The eye damage/irritation classification is not applied due to the nature of this product (adhesive film).

**CLASSIFICATION:**

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
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4		40 - 70
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	500-033-5	5 - 10
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	238-098-4	1 - 5

**HAZARD STATEMENTS:**

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

**PRECAUTIONARY STATEMENTS**

**Prevention:**

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

**Response:**

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

**SUPPLEMENTAL INFORMATION:**

**Supplemental Hazard Statements:**

EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

11% of the mixture consists of components of unknown acute oral toxicity.

Contains 5% of components with unknown hazards to the aquatic environment.

### 2.3. Other hazards

None known.

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

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Phenol-formaldehyde polymer, glycidyl ether	(CAS-No.) 28064-14-4	40 - 70	Skin Sens. 1, H317 Aquatic Chronic 2, H411
reaction product: bisphenol-A-(epichlorhydrin)	(CAS-No.) 25068-38-6 (EC-No.) 500-033-5	5 - 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Non-Hazardous Ingredients	Trade Secret	3 - 7	Substance not classified as hazardous
Sulfuric acid, compd. with graphite	(CAS-No.) 12777-87-6 (EC-No.) 235-819-4 (REACH-No.) 01-2119514421-54	3 - 7	Substance not classified as hazardous
Dicyandiamide	(CAS-No.) 461-58-5 (EC-No.) 207-312-8	1 - 5	Substance not classified as hazardous
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	(CAS-No.) 14228-73-0 (EC-No.) 238-098-4	1 - 5	Aquatic Chronic 3, H412 Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1B, H317
4,4'-Methylenediphenylene bis(dimethylurea)	(CAS-No.) 10097-09-3 (EC-No.) ELINCS 423-370-9	1 - 5	Aquatic Chronic 3, H412
Perlite, Expanded	(CAS-No.) 93763-70-3	1 - 5	Substance with a national occupational exposure limit
Titanium dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5	1 - 5	Carc. 2, H351 (inhalation)

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

### Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
reaction product: bisphenol-A-(epichlorhydrin)	(CAS-No.) 25068-38-6 (EC-No.) 500-033-5	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation

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

#### Skin contact

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

#### Eye contact

If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, get medical attention.

#### If swallowed

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

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

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

Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching).

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

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

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

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

None inherent in this product.

### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Hydrogen cyanide.	During combustion.
Ammonia	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. 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**

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.

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

Store away from heat. Store away from amines.

**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>
Titanium dioxide	13463-67-7	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m <sup>3</sup> ;TWA(as respirable dust)(8 hours):4 mg/m <sup>3</sup>	
DUST, INERT OR NUISANCE	93763-70-3	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m <sup>3</sup> ;TWA(as respirable dust)(8 hours):4 mg/m <sup>3</sup>	

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

**Biological limit values**

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

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

**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.

*Applicable Norms/Standards*

Use eye/face protection conforming to EN 166

**Skin/hand protection**

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

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

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

*Applicable Norms/Standards*

Use gloves tested to EN 374

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

**Respiratory protection**

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

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

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

*Applicable Norms/Standards*

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

**SECTION 9: Physical and chemical properties**

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

<b>Physical state</b>	Solid.
<b>Specific Physical Form:</b>	Film
<b>Colour</b>	Grey
<b>Odor</b>	Odourless
<b>Odour threshold</b>	<i>No data available.</i>
<b>Melting point/freezing point</b>	<i>No data available.</i>
<b>Boiling point/boiling range</b>	<i>Not applicable.</i>

Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Flash point	No flash point
Autoignition temperature	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
pH	<i>substance/mixture is non-soluble (in water)</i>
Kinematic Viscosity	<i>Not applicable.</i>
Water solubility	<i>No data available.</i>
Solubility- non-water	Nil
Partition coefficient: n-octanol/water	<i>No data available.</i>
Density	1 - 1.5 g/cm <sup>3</sup>
Relative density	<i>No data available.</i>
Relative Vapour Density	Nil

## 9.2. Other information

### 9.2.2 Other safety characteristics

EU Volatile Organic Compounds  
Evaporation rate

*No data available.*  
*Not applicable.*

## 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

Avoid curing large quantities of material to prevent a premature reaction (exotherm) with production of intense heat and smoke.

Heat.

### 10.5 Incompatible materials

Accelerators

Amines.

### 10.6 Hazardous decomposition products

**Substance**

None known.

**Condition**

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

**internal hazard assessments.**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Signs and Symptoms of Exposure**

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

**Inhalation**

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

**Skin contact**

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

**Eye contact**

Contact with the eyes during product use is not expected to result in significant irritation.

**Ingestion**

Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation. 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
Phenol-formaldehyde polymer, glycidyl ether	Dermal	Rabbit	LD50 > 6,000 mg/kg
Phenol-formaldehyde polymer, glycidyl ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Phenol-formaldehyde polymer, glycidyl ether	Ingestion	Rat	LD50 > 4,000 mg/kg
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	Rat	LD50 > 1,600 mg/kg
reaction product: bisphenol-A-(epichlorhydrin)	Ingestion	Rat	LD50 > 1,000 mg/kg
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Dermal	Rabbit	LD50 > 2,000 mg/kg
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.19 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Ingestion	Rat	LD50 1,098 mg/kg
Perlite, Expanded	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Perlite, Expanded	Ingestion	Professional judgement	LD50 estimated to be > 5,000 mg/kg
4,4'-Methylenediphenylene bis(dimethylurea)	Dermal	Rabbit	LD50 > 2,000 mg/kg
4,4'-Methylenediphenylene bis(dimethylurea)	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
Dicyandiamide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Dicyandiamide	Ingestion	Rat	LD50 > 30,000 mg/kg



ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Phenol-formaldehyde polymer, glycidyl ether	Rabbit	Minimal irritation
reaction product: bisphenol-A-(epichlorhydrin)	Rabbit	Mild irritant
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	In vitro data	Irritant
4,4'-Methylenediphenylene bis(dimethylurea)	Rabbit	Minimal irritation
Titanium dioxide	Rabbit	No significant irritation
Dicyandiamide	Human and animal	Minimal irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Phenol-formaldehyde polymer, glycidyl ether	Rabbit	Mild irritant
reaction product: bisphenol-A-(epichlorhydrin)	Rabbit	Moderate irritant
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	In vitro data	No significant irritation
4,4'-Methylenediphenylene bis(dimethylurea)	Rabbit	Mild irritant
Titanium dioxide	Rabbit	No significant irritation
Dicyandiamide	Professional judgement	Mild irritant

**Skin Sensitisation**

Name	Species	Value
Phenol-formaldehyde polymer, glycidyl ether	Human and animal	Sensitising
reaction product: bisphenol-A-(epichlorhydrin)	Human and animal	Sensitising
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Mouse	Sensitising
Titanium dioxide	Human and animal	Not classified
Dicyandiamide	Guinea pig	Not classified

**Respiratory Sensitisation**

Name	Species	Value
reaction product: bisphenol-A-(epichlorhydrin)	Human	Not classified

**Germ Cell Mutagenicity**

Name	Route	Value
Phenol-formaldehyde polymer, glycidyl ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
reaction product: bisphenol-A-(epichlorhydrin)	In vivo	Not mutagenic
reaction product: bisphenol-A-(epichlorhydrin)	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	In vivo	Not mutagenic
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	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
Dicyandiamide	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	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.
Dicyandiamide	Ingestion	Rat	Not carcinogenic

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
reaction product: bisphenol-A-(epichlorhydrin)	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
reaction product: bisphenol-A-(epichlorhydrin)	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
reaction product: bisphenol-A-(epichlorhydrin)	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	prematuring into lactation
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Ingestion	Not classified for male reproduction	Rat	NOAEL 300 mg/kg/day	33 days
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Ingestion	Not classified for development	Rat	NOAEL 300 mg/kg/day	prematuring into lactation
Dicyandiamide	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
Dicyandiamide	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	44 days
Dicyandiamide	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
reaction product: bisphenol-A-(epichlorhydrin)	Ingestion	auditory system   heart   endocrine system   hematopoietic	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

		system   liver   eyes   kidney and/or bladder				
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Ingestion	endocrine system   gastrointestinal tract   liver   heart   hematopoietic system   immune system   nervous system   kidney and/or bladder	Not classified	Rat	NOAEL 300 mg/kg/day	33 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
Dicyandiamide	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 6,822 mg/kg/day	13 weeks

**Aspiration Hazard**

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

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

**11.2. Information on other hazards**

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

**SECTION 12: Ecological information**

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

**12.1. Toxicity**

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Golden Orfe	Experimental	96 hours	LC50	5.7 mg/l
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Water flea	Experimental	48 hours	EC50	3.5 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Water flea	Estimated	48 hours	LC50	1.8 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Activated sludge	Experimental	3 hours	IC50	>100 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Green algae	Experimental	72 hours	EC50	>11 mg/l
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Green algae	Experimental	72 hours	NOEC	4.2 mg/l

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reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Water flea	Experimental	21 days	NOEC	0.3 mg/l
Sulfuric acid, compd. with graphite	12777-87-6	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
Sulfuric acid, compd. with graphite	12777-87-6	Water flea	Experimental	48 hours	EC50	>100 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Bacteria	Estimated	18 hours	EC50	10,264 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Green algae	Estimated	72 hours	EC50	26.7 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Rainbow trout	Estimated	96 hours	LC50	10.1 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Water flea	Estimated	48 hours	EC50	16.3 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Green algae	Estimated	72 hours	EC10	21.4 mg/l
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Water flea	Estimated	21 days	NOEC	11.7 mg/l
4,4'-Methylenediphenylene bis(dimethylurea)	10097-09-3	Activated sludge	Experimental	3 hours	IC50	>100 mg/l
4,4'-Methylenediphenylene bis(dimethylurea)	10097-09-3	Green algae	Experimental	96 hours	EC50	29.4 mg/l
4,4'-Methylenediphenylene bis(dimethylurea)	10097-09-3	Rainbow trout	Experimental	96 hours	LC50	>30.2 mg/l
4,4'-Methylenediphenylene bis(dimethylurea)	10097-09-3	Water flea	Experimental	48 hours	EC50	>39.8 mg/l
4,4'-Methylenediphenylene bis(dimethylurea)	10097-09-3	Green algae	Experimental	72 hours	NOEC	5.9 mg/l
Dicyandiamide	461-58-5	Bluegill	Experimental	96 hours	LC50	>1,000 mg/l
Dicyandiamide	461-58-5	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Dicyandiamide	461-58-5	Water flea	Experimental	48 hours	EC50	3,177 mg/l
Dicyandiamide	461-58-5	Green algae	Experimental	72 hours	NOEC	310 mg/l
Dicyandiamide	461-58-5	Water flea	Experimental	21 days	NOEC	25 mg/l
Dicyandiamide	461-58-5	Redworm	Experimental	14 days	LC50	>3,200 mg/kg (Dry Weight)
Perlite, Expanded	93763-70-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Laboratory Biodegradation	28 days	CO2 evolution	10-16 %CO2 evolution/THC O2 evolution (does not pass 10-day window)	OECD 301B - Modified sturm or CO2
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Experimental Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	
Sulfuric acid, compd. with graphite	12777-87-6	Data not availbl-insufficient	N/A	N/A	N/A	N/A
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Estimated Biodegradation	28 days	Dissolv. Organic Carbon Deplet	16.6 %removal of DOC	OECD 301F - Manometric respirometry
4,4'-Methylenediphenylene bis(dimethylurea)	10097-09-3	Experimental Biodegradation	28 days	CO2 evolution	31 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
Dicyandiamide	461-58-5	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	0 %removal of DOC	OECD 301E - Modif. OECD Screen
Dicyandiamide	461-58-5	Experimental Aquatic Inherent Biodegrad.	14 days	Dissolv. Organic Carbon Deplet	0 %removal of DOC	OECD 302B Zahn-Wellens/EVPA
Dicyandiamide	461-58-5	Experimental Biodegradation	61 days	CO2 evolution	1.1 %CO2 evolution/THC O2 evolution	OECD 309 Aero Sim Biod Water
Perlite, Expanded	93763-70-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A

### 12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Experimental Bioconcentration		Log Kow	3.242	
Sulfuric acid, compd. with graphite	12777-87-6	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	
4,4'-Methylenediphenylene bis(dimethylurea)	10097-09-3	Experimental Bioconcentration		Log Kow	1.14	EC A.8 Partition Coefficient
Dicyandiamide	461-58-5	Experimental BCF - Fish	42 days	Bioaccumulation factor	<=3.1	OECD305-Bioconcentration
Dicyandiamide	461-58-5	Experimental Bioconcentration		Log Kow	-0.52	OECD 107 log Kow shke flask mtd
Perlite, Expanded	93763-70-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	9.6	

### 12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	Estimated Mobility in Soil	Koc	57 l/kg	Episuite™

ohexane					
Dicyandiamide	461-58-5	Modeled Mobility in Soil	Koc	9 l/kg	Episuite™

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

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

**12.6. Endocrine disrupting properties**

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

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

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

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

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

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

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

**SECTION 14: Transportation information**

	<b>Ground Transport (ADR)</b>	<b>Air Transport (IATA)</b>	<b>Marine Transport (IMDG)</b>
<b>14.1 UN number or ID number</b>	UN3077	UN3077	UN3077
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(4,4'-ISOPROPYLIDENEDIPHENOL-EPICHLOROHYDRIN POLYMER)
<b>14.3 Transport hazard class(es)</b>	9	9	9

<b>14.4 Packing group</b>	III	III	III
<b>14.5 Environmental hazards</b>	Environmentally Hazardous	Not applicable	Marine Pollutant
<b>14.6 Special precautions for user</b>	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
<b>14.7 Marine Transport in bulk according to IMO instruments</b>	No data available.	No data available.	No data available.
<b>Control Temperature</b>	No data available.	No data available.	No data available.
<b>Emergency Temperature</b>	No data available.	No data available.	No data available.
<b>ADR Classification Code</b>	M7	Not applicable.	Not applicable.
<b>IMDG Segregation Code</b>	Not applicable.	Not applicable.	NONE

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

## SECTION 15: Regulatory information

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

#### Carcinogenicity

**Ingredient**

Titanium dioxide

**CAS Nbr**

13463-67-7

**Classification**

Grp. 2B: Possible human carc.

**Regulation**

International Agency for Research on Cancer

#### Global inventory status

Contact 3M for more information. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

#### DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

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

Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	200	500

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

No chemicals listed

**15.2. Chemical Safety Assessment**

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

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351i	Suspected of causing cancer by inhalation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Revision information:**

Label: CLP Percent Unknown information was modified.

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

Section 4: First Aid - notes to physician (REACH/GHS) information was modified.

Section 4: First aid for eye contact information information was modified.

Section 5: Fire - Advice for fire fighters information information was modified.

Section 7: Precautions safe handling information information was modified.

Section 8: glove data value information was deleted.

Section 8: glove data value information was modified.

Section 8: Occupational exposure limit table information was modified.

OEL Reg Agency Desc information was modified.

Section 8: Personal Protection - Thermal hazards information information was deleted.

Section 9: Vapour density text information was modified.

Section 11: Reproductive Toxicity Table information was modified.

Section 11: Target Organs - Repeated Table information was added.

Section 11: Target Organs - Repeated Table information was deleted.

Section 12: Component ecotoxicity information information was modified.

Section 12: Mobility in soil information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Bioaccumulative potential information information was modified.

Section 13: Standard Phrase Category Waste GHS information was modified.

Section 14 Multiplier – Main Heading information was deleted.

Section 14 Multiplier – Regulation Data information was deleted.

Section 14 Other Dangerous Goods – Regulation Data information was modified.

Section 14 Transport Category – Main Heading information was deleted.

Section 14 Transport Category – Regulation Data information was deleted.

Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was modified.

Section 14 Tunnel Code – Main Heading information was deleted.

Section 14 Tunnel Code – Regulation Data information was deleted.



Section 14 UN Number information was modified.

Section 15: Regulations - Inventories information was modified.

Section 15: Seveso Hazard Category Text information was added.

Section 15: Seveso Substance Text information was added.

Section 2: No PBT/vPvB information available warning information was added.

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

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