Safety Data Sheet

Document group:	41-3658-6	**Version number:**	2.01
Revision date:	14/03/2023	**Supersedes date:**	10/03/2023
Transportation version number:			

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

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

1.1. Product identifier
Scotch-Weld(tm)EC-3550 B/A FST

Product Identification Numbers
UU-0096-3054-0 UU-0106-0684-4

7100176352 7100214732

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

Identified uses
Structural void filling compound

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:

41-3043-1, 38-2818-3

TRANSPORTATION INFORMATION

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

KIT LABEL

2.1. Classification of the substance or mixture
The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

CLASSIFICATION:
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Germ Cell Mutagenicity, Category 2 - Muta. 2; H341
Reproductive Toxicity, Category 2 - Repr. 2; H361fd
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

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

SIGNAL WORD
DANGER.

Symbols
GHS05 (Corrosion) |GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Contains:
Amine terminated adduct; EXPANDED ACRYLONITRILE WITH 3% OF ISOPENTANE CAPS COAED WITH CALCIUM CARBONATE; Modified nitrile polymer; methacrylonitrile; Sulfuric acid, compd. with graphite; Nitric acid, calcium salt, tetrahydrate; Boron zinc hydroxide oxide; 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane; bis-[4-(2,3-epoxipropoxi)phenyl]propane; Aluminium hydroxide; [3-(2,3-epoxypropoxy)propyl]trimethoxysilane; Phenol-formaldehyde polymer, glycidyl ether; Oxide glass chemicals; OXIDE GLASS CHEMICALS (non-fibrous); Siloxanes and Silicones, di-Me, reaction products with silica; Bis[(dimethylamino)methyl]phenol; red phosphorus; Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia; 2,4,6-tris(dimethylaminomethyl)phenol

HAZARD STATEMENTS:

H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

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

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/physician.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.

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

Revision information:
Section 1: Product identification numbers information was modified.
Section 01: SAP Material Numbers information was modified.

Safety Data Sheet

Document group:	41-3043-1	**Version number:**	5.00
Revision date:	11/02/2025	**Supersedes date:**	19/01/2023

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

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

1.1. Product identifier
3M(tm) Scotch-Weld(tm) Structural Void Filling Compound EC-3550 B/A FST : Part B

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

Identified uses
Industrial use.

1.3. Details of the supplier of the safety data sheet

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

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

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

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

CLASSIFICATION:
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Germ Cell Mutagenicity, Category 2 - Muta. 2; H341
Reproductive Toxicity, Category 2 - Repr. 2; H361fd
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

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

SIGNAL WORD
WARNING.

Symbols
GHS07 (Exclamation mark) |GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Ingredient	CAS Nbr	EC No.	% by Wt
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4		15 - 40
Oxide glass chemicals	65997-17-3	266-046-0	10 - 30
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	14228-73-0	238-098-4	5 - 20
Aluminium hydroxide	21645-51-2	244-492-7	5 - 20
Sulfuric acid, compd. with graphite	12777-87-6	235-819-4	5 - 10
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	216-823-5	1 - 5
red phosphorus	7723-14-0	231-768-7	1 - 5
Boron zinc hydroxide oxide	138265-88-0	235-804-2	1 - 5
EXPANDED ACRYLONITRILE WITH 3% OF ISOPENTANE CAPS COAED WITH CALCIUM CARBONATE	Trade Secret		1 - 5
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	219-784-2	0.5 - 1.5
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		0.5 - 1.5
methacrylonitrile	126-98-7	204-817-5	< 0.1

HAZARD STATEMENTS:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

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

Response:

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

P391 Collect spillage.

3% of the mixture consists of components of unknown acute oral toxicity.

Contains 4% 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], as amended for GB
Phenol-formaldehyde polymer, glycidyl ether	(CAS-No.) 28064-14-4	15 - 40	Skin Sens. 1, H317 Aquatic Chronic 2, H411
Oxide glass chemicals	(CAS-No.) 65997-17-3 (EC-No.) 266-046-0	10 - 30	Substance with a national occupational exposure limit
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	(CAS-No.) 14228-73-0 (EC-No.) 238-098-4	5 - 20	Aquatic Chronic 3, H412 Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Aluminium hydroxide	(CAS-No.) 21645-51-2 (EC-No.) 244-492-7	5 - 20	Substance with a national occupational exposure limit
Sulfuric acid, compd. with graphite	(CAS-No.) 12777-87-6 (EC-No.) 235-819-4	5 - 10	Substance not classified as hazardous
EXPANDED ACRYLONITRILE WITH 3% OF ISOPENTANE CAPS COAED WITH CALCIUM CARBONATE	Trade Secret	1 - 5	Substance not classified as hazardous
red phosphorus	(CAS-No.) 7723-14-0 (EC-No.) 231-768-7	1 - 5	Flam. Sol. 1, H228 Aquatic Chronic 3, H412
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Boron zinc hydroxide oxide	(CAS-No.) 138265-88-0 (EC-No.) 235-804-2	1 - 5	Eye Irrit. 2, H319 Muta. 2, H341 Repr. 2, H361df Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	(CAS-No.) 2530-83-8 (EC-No.) 219-784-2	0.5 - 1.5	Eye Dam. 1, H318 Aquatic Chronic 3, H412

Siloxanes and Silicones, di-Me, reaction products with silica	(CAS-No.) 67762-90-7	0.5 - 1.5	Substance with a national occupational exposure limit
methacrylonitrile	(CAS-No.) 126-98-7 (EC-No.) 204-817-5	< 0.1	Flam. Liq. 2, H225 Acute Tox. 3, H331 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Sens. 1, H317 Nota D

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

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319
methacrylonitrile	(CAS-No.) 126-98-7 (EC-No.) 204-817-5	(C >= 0.2%) Skin Sens. 1, H317

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 GB CLP classification include:
Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision).

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

Not applicable

SECTION 5: Fire-fighting measures

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

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Chloride	During combustion.
Irritant vapours or gases.	During combustion.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. 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.

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
Avoid breathing of dust created by cutting, sanding, grinding or machining. 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 oxidizing agents. 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.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
methacrylonitrile	126-98-7	UK HSE	TWA:2.8 mg/m3(1 ppm)	SKIN
DUST, INERT OR NUISANCE	21645-51-2	UK HSE	TWA(as respirable dust):4 mg/m3;TWA(as inhalable dust):10 mg/m3	
Oxide glass chemicals	65997-17-3	Manufacturer determined	TWA(as non-fibrous, respirable)(8 hours):3 mg/m3;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m3	
Silicon dioxide	67762-90-7	UK HSE	TWA(as respirable dust):2.4 mg/m3;TWA(as inhalable dust):6 mg/m3	
red phosphorus	7723-14-0	UK HSE	TWA: 0.1 mg/m³; STEL: 0.3 mg/m³	

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

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

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Applicable Norms/Standards
Use eye protection conforming to EN 166

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

clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended:

Material	Thickness (mm)	Breakthrough Time
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

Physical state	Solid.
Specific Physical Form:	Paste
Colour	Brown
Odor	Epoxy
Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	*No data available.*
Flammability	Not applicable.
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Flash point	>=93.3 ºC
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	*No data available.*
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	*Not applicable.*
Density	*No data available.*
Relative density	0.45 - 0.55
Relative Vapour Density	*Not applicable.*
Particle Characteristics	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	*Not applicable.*
Percent volatile	*No data available.*

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
Amines.

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

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

Signs and Symptoms of Exposure

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

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

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

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

Ingestion
May be harmful if swallowed.
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Genotoxicity:
Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

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	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >2,000 - =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
Oxide glass chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide glass chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 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
Aluminium hydroxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium hydroxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminium hydroxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Sulfuric acid, compd. with graphite	Dermal	Rat	LD50 > 2,000 mg/kg
Sulfuric acid, compd. with graphite	Ingestion	Rat	LD50 > 2,000 mg/kg
Boron zinc hydroxide oxide	Dermal	Rabbit	LD50 > 5,000 mg/kg
Boron zinc hydroxide oxide	Inhalation-Dust/Mist	Rat	LC50 > 4.95 mg/l
Boron zinc hydroxide oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
red phosphorus	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
red phosphorus	Ingestion	Rat	LD50 > 15,000 mg/kg
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Dermal	Rabbit	LD50 4,000 mg/kg
Siloxanes and Silicones, di-Me, reaction products with silica	Dermal	Rabbit	LD50 > 5,000 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
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
methacrylonitrile	Dermal		estimated to be 200 - 1,000 mg/kg
methacrylonitrile	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
methacrylonitrile	Inhalation-Vapour		estimated to be 2 - 10 mg/l
methacrylonitrile	Ingestion		estimated to be 50 - 300 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Phenol-formaldehyde polymer, glycidyl ether	Rabbit	Minimal irritation
Oxide glass chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	In vitro data	Irritant
Aluminium hydroxide	Rabbit	No significant irritation
Sulfuric acid, compd. with graphite	Rat	Minimal irritation
Boron zinc hydroxide oxide	Rabbit	No significant irritation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Mild irritant
red phosphorus	Rabbit	No significant irritation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Rabbit	Mild irritant
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Phenol-formaldehyde polymer, glycidyl ether	Rabbit	Mild irritant
Oxide glass chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	In vitro data	No significant irritation
Aluminium hydroxide	Rabbit	No significant irritation
Sulfuric acid, compd. with graphite	Rabbit	Mild irritant
Boron zinc hydroxide oxide	Rabbit	Severe irritant
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Moderate irritant
red phosphorus	Rabbit	No significant irritation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Rabbit	Corrosive
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Phenol-formaldehyde polymer, glycidyl ether	Human and animal	Sensitising
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Mouse	Sensitising
Aluminium hydroxide	Guinea pig	Not classified
Boron zinc hydroxide oxide	Guinea pig	Not classified
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Human and	Sensitising

	animal	
red phosphorus	Guinea pig	Not classified
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Guinea pig	Not classified
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Phenol-formaldehyde polymer, glycidyl ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
Oxide glass chemicals	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
Sulfuric acid, compd. with graphite	In Vitro	Not mutagenic
Boron zinc hydroxide oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Boron zinc hydroxide oxide	In vivo	Mutagenic
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In vivo	Not mutagenic
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In Vitro	Some positive data exist, but the data are not sufficient for classification
red phosphorus	In Vitro	Not mutagenic
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	In vivo	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

Carcinogenicity

Name	Route	Species	Value
Oxide glass chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Aluminium hydroxide	Not specified.	Multiple animal species	Not carcinogenic
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Dermal	Mouse	Not carcinogenic
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	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
1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	premating 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	premating into lactation

Aluminium hydroxide	Ingestion	Not classified for development	Rat	NOAEL 768 mg/kg/day	during organogenesis
Boron zinc hydroxide oxide	Ingestion	Toxic to male reproduction	Rat	NOAEL 100 mg/kg/day	92 days
Boron zinc hydroxide oxide	Ingestion	Toxic to development	Rat	LOAEL 100 mg/kg/day	during gestation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for development	Rat	NOAEL 3,000 mg/kg/day	during organogenesis
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
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	
Boron zinc hydroxide oxide	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
Oxide glass chemicals	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
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
Sulfuric acid, compd. with graphite	Ingestion	hematopoietic system | nervous system | eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
Boron zinc hydroxide oxide	Inhalation	immune system | respiratory system | heart | endocrine system | hematopoietic system | liver | nervous system |	Not classified	Rat	NOAEL 0.15 mg/l	2 weeks

		kidney and/or bladder				
Boron zinc hydroxide oxide	Ingestion	endocrine system | liver | kidney and/or bladder | heart | skin | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 375 mg/kg/day	92 days
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	auditory system | heart | endocrine system | hematopoietic system | liver | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
[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	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure

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

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

11.2. Information on other hazards

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

SECTION 12: Ecological information

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

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Phenol-formaldehyde	28064-14-4	Golden Orfe	Experimental	96 hours	LC50	5.7 mg/l

polymer, glycidyl ether						
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Water flea	Experimental	48 hours	EC50	3.5 mg/l
Oxide glass chemicals	65997-17-3	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Oxide glass chemicals	65997-17-3	Water flea	Experimental	72 hours	EC50	>1,000 mg/l
Oxide glass chemicals	65997-17-3	Zebra Fish	Experimental	96 hours	LC50	>1,000 mg/l
Oxide glass chemicals	65997-17-3	Green algae	Experimental	72 hours	NOEC	>=1,000 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
Aluminium hydroxide	21645-51-2	Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium hydroxide	21645-51-2	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium hydroxide	21645-51-2	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium hydroxide	21645-51-2	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 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
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Activated sludge	Analogous Compound	3 hours	IC50	>100 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Green algae	Experimental	72 hours	ErC50	>11 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
red phosphorus	7723-14-0	Activated sludge	Estimated	3 hours	NOEC	1,000 mg/l
red phosphorus	7723-14-0	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l

red phosphorus	7723-14-0	Green algae	Experimental	72 hours	EL50	18.3 mg/l
red phosphorus	7723-14-0	Water flea	Experimental	48 hours	EL50	10.5 mg/l
red phosphorus	7723-14-0	Zebra Fish	Experimental	96 hours	EL50	2.5 mg/l
red phosphorus	7723-14-0	Green algae	Experimental	72 hours	EL10	6.6 mg/l
Boron zinc hydroxide oxide	138265-88-0	Activated sludge	Estimated	4 hours	NOEC	0.33 mg/l
Boron zinc hydroxide oxide	138265-88-0	Green algae	Estimated	72 hours	IC50	0.45 mg/l
Boron zinc hydroxide oxide	138265-88-0	Rainbow trout	Estimated	96 hours	LC50	0.56 mg/l
Boron zinc hydroxide oxide	138265-88-0	Water flea	Estimated	48 hours	EC50	0.33 mg/l
Boron zinc hydroxide oxide	138265-88-0	Green algae	Estimated	72 hours	NOEC	0.02 mg/l
Boron zinc hydroxide oxide	138265-88-0	Invertebrate	Estimated	24 days	NOEC	0.02 mg/l
Boron zinc hydroxide oxide	138265-88-0	Rainbow trout	Estimated	25 days	NOEC	0.08 mg/l
Boron zinc hydroxide oxide	138265-88-0	Water flea	Estimated	21 days	NOEC	0.12 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	Green algae	Experimental	96 hours	ErC50	350 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Invertebrate	Experimental	48 hours	LC50	324 mg/l
[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	Water flea	Experimental	21 days	NOEC	100 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
methacrylonitrile	126-98-7	Green algae	Experimental	72 hours	EC50	25.3 mg/l
methacrylonitrile	126-98-7	Water flea	Experimental	48 hours	EC50	205 mg/l
methacrylonitrile	126-98-7	Zebra Fish	Experimental	96 hours	LC50	354 mg/l
methacrylonitrile	126-98-7	Green algae	Experimental	72 hours	NOEC	10 mg/l
methacrylonitrile	126-98-7	Water flea	Experimental	21 days	NOEC	2.2 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/THCO2 evolution (does not pass 10-day window)	OECD 301B - Modified sturm or CO2
Oxide glass	65997-17-3	Data not availbl-	N/A	N/A	N/A	N/A

chemicals		insufficient				
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
Aluminium hydroxide	21645-51-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Sulfuric acid, compd. with graphite	12777-87-6	Data not availbl-insufficient	N/A	N/A	N/A	N/A
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	117 hours (t 1/2)	OECD 111 Hydrolysis func of pH
red phosphorus	7723-14-0	Experimental Hydrolysis		Hydrolytic half-life	8.3 years (t 1/2)	
Boron zinc hydroxide oxide	138265-88-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 %removal of DOC	EC C.4.A. DOC Die-Away Test
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	6.5 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
methacrylonitrile	126-98-7	Experimental Biodegradation	28 days	BOD	83 %BOD/ThOD	OECD 301C - MITI test (I)

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
Oxide glass 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 Bioconcentration		Bioaccumulation factor	3	
Aluminium hydroxide	21645-51-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Sulfuric acid, compd. with graphite	12777-87-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	OECD 117 log Kow HPLC method
red phosphorus	7723-14-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Boron zinc hydroxide oxide	138265-88-0	Estimated BCF - Fish	56 days	Bioaccumulation factor	242	OECD305-Bioconcentration
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Bioconcentration		Log Kow	0.5	Episuite™
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

methacrylonitrile	126-98-7	Experimental Bioconcentration		Log Kow	0.68	

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™
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Modeled Mobility in Soil	Koc	450 l/kg	Episuite™
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Modeled Mobility in Soil	Koc	10 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

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

12.6. Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate 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

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	UN3077	UN3077	UN3077
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(ZINC BORATE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(ZINC BORATE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(ZINC BORATE)

14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	M7	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

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

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Gr. 3: Not classifiable	International Agency for Research on Cancer

Global inventory status
Contact 3M for more information.

COMAH Regulation, SI 2015/483
Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
E2 Hazardous to the Aquatic 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
methacrylonitrile	126-98-7	50	200

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

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

SECTION 16: Other information

List of relevant H statements

H225	Highly flammable liquid and vapour.
H228	Flammable solid.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.
H361df	Suspected of damaging fertility. Suspected of damaging the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
GB Section 02: CLP Ingredient table information was modified.
Section 02: Label Elements: GB Percent Unknown information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Occupational exposure limit table information was modified.
OEL Reg Agency Desc information was modified.
Section 9: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 09: Particle Characteristics N/A information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 15: Seveso Substance Text information was modified.

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 SDSs for Great Britain are available at www.3M.com/uk
For Northern Ireland documents, please contact your 3M representative to obtain a copy.

Safety Data Sheet

Document group:	38-2818-3	**Version number:**	7.00
Revision date:	19/06/2023	**Supersedes date:**	13/03/2023

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

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

1.1. Product identifier
3M Scotch-Weld(tm) Structural Void Filling Compound EC-3550 B/A FST : Part A

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

Identified uses
Industrial use.

1.3. Details of the supplier of the safety data sheet

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

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

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.
This material has been tested for skin corrosion/irritation and the test results are reflected in the assigned classification.

CLASSIFICATION:
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Germ Cell Mutagenicity, Category 2 - Muta. 2; H341
Reproductive Toxicity, Category 2 - Repr. 2; H361fd
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

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

SIGNAL WORD
DANGER.

Symbols
GHS05 (Corrosion) |GHS08 (Health Hazard) |GHS09 (Environment) |

Pictograms

Ingredient	CAS Nbr	EC No.	% by Wt
Amine terminated adduct	Trade Secret		15 - 40
Aluminium hydroxide	21645-51-2	244-492-7	10 - 30
OXIDE GLASS CHEMICALS (non-fibrous)	65997-17-3	266-046-0	10 - 20
Bis[(dimethylamino)methyl]phenol	71074-89-0	275-162-0	0.5 - 1.5
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	618-561-0	10 - 15
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		0.5 - 1.5
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	202-013-9	5 - 8
Boron zinc hydroxide oxide	138265-88-0	235-804-2	3 - 5
methacrylonitrile	126-98-7	204-817-5	< 0.03
Nitric acid, calcium salt, tetrahydrate	13477-34-4	233-332-1	1 - 3
Modified nitrile polymer	Trade Secret		1 - 3

HAZARD STATEMENTS:

H315	Causes skin irritation.
H318	Causes serious eye damage.
H341	Suspected of causing genetic defects.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

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

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/physician.
P391	Collect spillage.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:
EUH208 Contains methacrylonitrile. May produce an allergic reaction.

36% of the mixture consists of components of unknown acute oral toxicity.
38% of the mixture consists of components of unknown acute dermal toxicity.

Contains 39% 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], as amended for GB
Amine terminated adduct	Trade Secret	15 - 40	Substance not classified as hazardous
Aluminium hydroxide	(CAS-No.) 21645-51-2 (EC-No.) 244-492-7	10 - 30	Substance with a national occupational exposure limit
OXIDE GLASS CHEMICALS (non-fibrous)	(CAS-No.) 65997-17-3 (EC-No.) 266-046-0	10 - 20	Substance not classified as hazardous
Bis[(dimethylamino)methyl]phenol	(CAS-No.) 71074-89-0 (EC-No.) 275-162-0	0.5 - 1.5	Acute Tox. 4, H302 Skin Corr. 1C, H314
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	(CAS-No.) 9046-10-0 (EC-No.) 618-561-0	10 - 15	Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412
Siloxanes and Silicones, di-Me, reaction products with silica	(CAS-No.) 67762-90-7	0.5 - 1.5	Substance with a national occupational exposure limit
2,4,6-tris(dimethylaminomethyl)phenol	(CAS-No.) 90-72-2 (EC-No.) 202-013-9	5 - 8	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318
Boron zinc hydroxide oxide	(CAS-No.) 138265-88-0 (EC-No.) 235-804-2	3 - 5	Eye Irrit. 2, H319 Muta. 2, H341 Repr. 2, H361df Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
Modified nitrile polymer	Trade Secret	1 - 3	Substance not classified as hazardous
Nitric acid, calcium salt, tetrahydrate	(CAS-No.) 13477-34-4 (EC-No.) 233-332-1	1 - 3	Acute Tox. 4, H302 Eye Dam. 1, H318
methacrylonitrile	(CAS-No.) 126-98-7	< 0.03	Flam. Liq. 2, H225

	(EC-No.) 204-817-5		Acute Tox. 3, H331 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Sens. 1, H317 Nota D

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance.
Please see section 16 for the full text of any H statements referred to in this section

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
methacrylonitrile	(CAS-No.) 126-98-7 (EC-No.) 204-817-5	(C >= 0.2%) Skin Sens. 1, H317

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

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

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

4.2. Most important symptoms and effects, both acute and delayed
The most important symptoms and effects based on the GB CLP classification include:
Irritation to the skin (localized redness, swelling, itching, and dryness). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

4.3. Indication of any immediate medical attention and special treatment required
Overexposure to this product may result in methemoglobinemia. Methemoglobinemia may be clinically suspected by the presence of clinical "cyanosis" in the presence of a normal PaO2 (as obtained by arterial blood gases). Routine pulse oximetry may be inaccurate for monitoring oxygen saturation in the presence of methemoglobinemia, and should not be used to make the diagnosis of this disorder. If the patient is symptomatic or if the methemoglobin level is >20%, specific therapy with methylene blue should be considered as part of the medical management.

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	Condition
Amine compounds.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.

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

SECTION 6: Accidental release measures

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

6.2. Environmental precautions
Avoid release to the environment.

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
Avoid breathing of dust created by cutting, sanding, grinding or machining. 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. Avoid release to the environment. 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.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
methacrylonitrile	126-98-7	UK HSC	TWA:2.8 mg/m3(1 ppm)	SKIN

DUST, INERT OR NUISANCE	21645-51-2	UK HSC	TWA(as respirable dust):4 mg/m3;TWA(as inhalable dust):10 mg/m3
Silicon dioxide	67762-90-7	UK HSC	TWA(as respirable dust):2.4 mg/m3;TWA(as inhalable dust):6 mg/m3

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

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

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Applicable Norms/Standards
Use eye/face protection conforming to EN 166

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

Material	Thickness (mm)	Breakthrough Time
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

Physical state	Solid.
Specific Physical Form:	Paste
Colour	White
Odor	Low Odor
Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	*Not applicable.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Flash point	>=93.3 ºC [*Test Method:*Closed Cup]
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	*No data available.*
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	*Not applicable.*
Density	*No data available.*
Relative density	0.5 - 0.56 [*Ref Std:*WATER=1]
Relative Vapour Density	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	*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
Heat.

10.5 Incompatible materials
Strong acids.

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

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

Signs and Symptoms of Exposure

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

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

Skin contact
Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, dryness, cracking, blistering, and pain.

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:

Single exposure may cause target organ effects:
Methemoglobinemia: Signs/symptoms may include headache, dizziness, nausea, difficulty breathing, and generalised weakness.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Genotoxicity:
Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg

Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Aluminium hydroxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium hydroxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminium hydroxide	Ingestion	Rat	LD50 > 5,000 mg/kg
OXIDE GLASS CHEMICALS (non-fibrous)	Dermal		LD50 estimated to be > 5,000 mg/kg
OXIDE GLASS CHEMICALS (non-fibrous)	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	Dermal	Rabbit	LD50 2,980 mg/kg
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	Ingestion	Rat	LD50 2,885 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
Boron zinc hydroxide oxide	Dermal	Rabbit	LD50 > 5,000 mg/kg
Boron zinc hydroxide oxide	Inhalation-Dust/Mist	Rat	LC50 > 4.95 mg/l
Boron zinc hydroxide oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Nitric acid, calcium salt, tetrahydrate	Ingestion	Rat	LD50 >300, <2000 mg/kg
Nitric acid, calcium salt, tetrahydrate	Dermal	similar compounds	LD50 > 2,000 mg/kg
Bis[(dimethylamino)methyl]phenol	Ingestion		LD50 estimated to be 300 - 2,000 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
methacrylonitrile	Dermal		estimated to be 200 - 1,000 mg/kg
methacrylonitrile	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
methacrylonitrile	Inhalation-Vapour		estimated to be 2 - 10 mg/l
methacrylonitrile	Ingestion		estimated to be 50 - 300 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	In vitro data	Irritant
Aluminium hydroxide	Rabbit	No significant irritation
OXIDE GLASS CHEMICALS (non-fibrous)	Professional judgement	No significant irritation
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	Rabbit	Corrosive
2,4,6-tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Boron zinc hydroxide oxide	Rabbit	No significant irritation
Nitric acid, calcium salt, tetrahydrate	similar compounds	No significant irritation
Bis[(dimethylamino)methyl]phenol	similar compounds	Corrosive
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value

Aluminium hydroxide	Rabbit	No significant irritation
OXIDE GLASS CHEMICALS (non-fibrous)	Professional judgement	No significant irritation
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	Rabbit	Corrosive
2,4,6-tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Boron zinc hydroxide oxide	Rabbit	Severe irritant
Nitric acid, calcium salt, tetrahydrate	Rabbit	Corrosive
Bis[(dimethylamino)methyl]phenol	similar compounds	Corrosive
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Aluminium hydroxide	Guinea pig	Not classified
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	Guinea pig	Not classified
2,4,6-tris(dimethylaminomethyl)phenol	Guinea pig	Not classified
Boron zinc hydroxide oxide	Guinea pig	Not classified
Nitric acid, calcium salt, tetrahydrate	similar compounds	Not classified
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	In Vitro	Not mutagenic
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	In vivo	Not mutagenic
2,4,6-tris(dimethylaminomethyl)phenol	In Vitro	Not mutagenic
Boron zinc hydroxide oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Boron zinc hydroxide oxide	In vivo	Mutagenic
Nitric acid, calcium salt, tetrahydrate	In Vitro	Not mutagenic
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Aluminium hydroxide	Not specified.	Multiple animal species	Not carcinogenic
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	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

Aluminium hydroxide	Ingestion	Not classified for development	Rat	NOAEL 768 mg/kg/day	during organogenesis
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	Dermal	Not classified for female reproduction	Rat	NOAEL 30 mg/kg/day	premating & during gestation
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	Dermal	Not classified for male reproduction	Rat	NOAEL 30 mg/kg/day	premating & during gestation
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	Dermal	Not classified for development	Rat	NOAEL 30 mg/kg/day	premating & during gestation
Boron zinc hydroxide oxide	Ingestion	Toxic to male reproduction	Rat	NOAEL 100 mg/kg/day	92 days
Boron zinc hydroxide oxide	Ingestion	Toxic to development	Rat	LOAEL 100 mg/kg/day	during gestation
Nitric acid, calcium salt, tetrahydrate	Ingestion	Not classified for female reproduction	similar compounds	NOAEL 1,500 mg/kg/day	premating into lactation
Nitric acid, calcium salt, tetrahydrate	Ingestion	Not classified for male reproduction	similar compounds	NOAEL 1,500 mg/kg/day	28 days
Nitric acid, calcium salt, tetrahydrate	Ingestion	Not classified for development	similar compounds	NOAEL 1,500 mg/kg/day	premating into lactation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Siloxanes and Silicones, di-Me, reaction products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	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	
Boron zinc hydroxide oxide	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Nitric acid, calcium salt, tetrahydrate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Nitric acid, calcium salt, tetrahydrate	Ingestion	methemoglobinemia	Causes damage to organs	Human	NOAEL Not available	environmental exposure

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 | auditory system | hematopoietic system | eyes	Not classified	Rat	NOAEL 125 mg/kg/day	28 days
Boron zinc hydroxide oxide	Inhalation	immune system | respiratory system | heart | endocrine system | hematopoietic	Not classified	Rat	NOAEL 0.15 mg/l	2 weeks

		system | liver | nervous system | kidney and/or bladder				
Boron zinc hydroxide oxide	Ingestion	endocrine system | liver | kidney and/or bladder | heart | skin | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 375 mg/kg/day	92 days
Nitric acid, calcium salt, tetrahydrate	Ingestion	heart | skin | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | nervous system | eyes | kidney and/or bladder | respiratory system | vascular system	Not classified	similar compoun ds	NOAEL 1,500 mg/kg/day	28 days
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	Some positive data exist, but the data are not sufficient for classification

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

11.2. Information on other hazards

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

SECTION 12: Ecological information

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

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Aluminium hydroxide	21645-51-2	Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium hydroxide	21645-51-2	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium hydroxide	21645-51-2	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium hydroxide	21645-51-2	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l

OXIDE GLASS CHEMICALS (non-fibrous)	65997-17-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Bis[(dimethylamino)methyl]phenol	71074-89-0	N/A	Data not available or insufficient for classification	N/A	N/A	NA
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	Copepod	Experimental	48 hours	LC50	418.34 mg/l
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	Diatom	Experimental	72 hours	EC50	142 mg/l
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	Green algae	Experimental	72 hours	EC50	15 mg/l
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	Rainbow trout	Experimental	96 hours	LC50	>15 mg/l
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	Sheepshead Minnow	Experimental	96 hours	LC50	772.14 mg/l
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	Water flea	Experimental	48 hours	EC50	80 mg/l
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	Diatom	Experimental	72 hours	EC10	33 mg/l
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	Green algae	Experimental	72 hours	EC10	1.4 mg/l
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
2,4,6-tris(dimethylamino methyl)phenol	90-72-2	N/A	Experimental	96 hours	LC50	718 mg/l
2,4,6-tris(dimethylamino methyl)phenol	90-72-2	Common Carp	Experimental	96 hours	LC50	>100 mg/l
2,4,6-tris(dimethylamino methyl)phenol	90-72-2	Green algae	Experimental	72 hours	EC50	46.7 mg/l
2,4,6-tris(dimethylamino methyl)phenol	90-72-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
2,4,6-tris(dimethylamino methyl)phenol	90-72-2	Green algae	Experimental	72 hours	NOEC	6.44 mg/l
Boron zinc hydroxide oxide	138265-88-0	Activated sludge	Estimated	4 hours	NOEC	0.33 mg/l

Boron zinc hydroxide oxide	138265-88-0	Green algae	Estimated	72 hours	IC50	0.45 mg/l
Boron zinc hydroxide oxide	138265-88-0	Rainbow trout	Estimated	96 hours	LC50	0.56 mg/l
Boron zinc hydroxide oxide	138265-88-0	Water flea	Estimated	48 hours	EC50	0.33 mg/l
Boron zinc hydroxide oxide	138265-88-0	Green algae	Estimated	72 hours	NOEC	0.02 mg/l
Boron zinc hydroxide oxide	138265-88-0	Invertebrate	Estimated	24 days	NOEC	0.02 mg/l
Boron zinc hydroxide oxide	138265-88-0	Rainbow trout	Estimated	25 days	NOEC	0.08 mg/l
Boron zinc hydroxide oxide	138265-88-0	Water flea	Estimated	21 days	NOEC	0.12 mg/l
methacrylonitrile	126-98-7	Green algae	Experimental	72 hours	EC50	25.3 mg/l
methacrylonitrile	126-98-7	Water flea	Experimental	48 hours	EC50	205 mg/l
methacrylonitrile	126-98-7	Zebra Fish	Experimental	96 hours	LC50	354 mg/l
methacrylonitrile	126-98-7	Green algae	Experimental	72 hours	NOEC	10 mg/l
methacrylonitrile	126-98-7	Water flea	Experimental	21 days	NOEC	2.2 mg/l
Nitric acid, calcium salt, tetrahydrate	13477-34-4	Guppy	Estimated	96 hours	LC50	1,378 mg/l
Nitric acid, calcium salt, tetrahydrate	13477-34-4	Fathead minnow	Estimated	30 days	NOEC	58 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Aluminium hydroxide	21645-51-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
OXIDE GLASS CHEMICALS (non-fibrous)	65997-17-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Bis[(dimethylamino)methyl]phenol	71074-89-0	Modeled Biodegradation	28 days	BOD	41 %CO2 evolution/THCO2 evolution	Catalogic™
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	Experimental Biodegradation	28 days	CO2 evolution	0 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
2,4,6-tris(dimethylamino methyl)phenol	90-72-2	Experimental Biodegradation	28 days	BOD	4 %BOD/ThOD	OECD 301D - Closed bottle test
Boron zinc hydroxide oxide	138265-88-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
methacrylonitrile	126-98-7	Experimental Biodegradation	28 days	BOD	83 %BOD/ThOD	OECD 301C - MITI test (I)
Nitric acid, calcium salt, tetrahydrate	13477-34-4	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
Aluminium hydroxide	21645-51-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

OXIDE GLASS CHEMICALS (non-fibrous)	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Bis[(dimethylamino)methyl]phenol	71074-89-0	Modeled Bioconcentration		Log Kow	-2.34	ACD/Labs ChemSketch™
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia	9046-10-0	Experimental Bioconcentration		Log Kow	1.34	OECD 117 log Kow HPLC method
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
2,4,6-tris(dimethylamino methyl)phenol	90-72-2	Experimental Bioconcentration		Log Kow	-0.66	830.7550 Part.Coef Shake Flask
Boron zinc hydroxide oxide	138265-88-0	Estimated BCF - Fish	56 days	Bioaccumulation factor	242	OECD305-Bioconcentration
methacrylonitrile	126-98-7	Experimental Bioconcentration		Log Kow	0.68	
Nitric acid, calcium salt, tetrahydrate	13477-34-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil
No test data available.

12.5. Results of the PBT and vPvB assessment

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

12.6. Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate 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

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	UN3077	UN3077	UN3077
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(ZINC BORATE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(ZINC BORATE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(ZINC BORATE)
14.3 Transport hazard class(es)	9	9	9
14.4 Packing group	III	III	III
14.5 Environmental hazards	Environmentally Hazardous	Not applicable	Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	M7	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

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

SECTION 15: Regulatory information

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

Global inventory status
Contact 3M for more information.

COMAH Regulation, SI 2015/483
Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of	
	Lower-tier requirements	Upper-tier requirements
E2 Hazardous to the Aquatic 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
methacrylonitrile	126-98-7	50	200

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

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

SECTION 16: Other information

List of relevant H statements

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
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.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.
H361df	Suspected of damaging fertility. Suspected of damaging the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
Section 12: Component ecotoxicity information information was modified.
Section 14 Classification Code – Regulation Data information was modified.
Section 14 Hazard Class + Sub Risk – Regulation Data information was modified.
Section 14 Proper Shipping Name information was modified.
Section 14 Segregation – Regulation Data information was modified.
Section 14 UN Number Column data information was modified.

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3M SDSs for Great Britain are available at www.3M.com/uk
For Northern Ireland documents, please contact your 3M representative to obtain a copy.