Safety Data Sheet

Document group:	37-8172-1	**Version number:**	4.00
Revision date:	05/06/2023	**Supersedes date:**	14/06/2021
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
PN37455 FC Epoxy Metal Filler

Product Identification Numbers
UU-0083-6201-2

7100157263

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

Identified uses
Metal Filler

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:

36-8087-3, 36-8086-5

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 1B - Skin Corr. 1B; H314
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336
Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400
Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

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) |GHS09 (Environment) |

Pictograms

Contains:
Polymeric amine; Carbon black; Nitric acid, calcium salt, tetrahydrate; m-Xylene-.alpha.alpha'.-diamine; reaction product: bisphenol-A-(epichlorhydrin); 2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer; 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane; 3,3'-Oxybis(ethyleneoxy)bis(propylamine); Silica, vitreous; Oxide glass chemicals; Siloxanes and Silicones, di-Me, reaction products with silica; Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine); salicylic acid; Amines, polyethylenepoly-, triethylenetetramine fraction; 2,4,6-tris(dimethylaminomethyl)phenol; Perlite, Expanded

HAZARD STATEMENTS:

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260A	Do not breathe vapours.
P273	Avoid release to the environment.
P280D	Wear protective gloves, protective clothing, and eye/face protection.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/physician.

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

Revision information:
GB Kit Information: CLP Percent Unknown information was added.
GB Label: CLP Ingredients - kit components information was added.
Label: CLP Percent Unknown - Kit information was deleted.
Kit: Component document group number(s) information was modified.
Label: CLP Ingredients - kit components information was deleted.
Label: CLP Classification information was modified.

Safety Data Sheet

Document group:	36-8087-3	**Version number:**	2.04
Revision date:	17/03/2023	**Supersedes date:**	27/05/2021

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
PN 37455FC Epoxy Metal Filler, Part B

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

Identified uses
Professional

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
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) |GHS09 (Environment) |

Pictograms

Ingredient	CAS Nbr	EC No.	% by Wt
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	500-033-5	30 - 40
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8		10 - 20
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	30583-72-3	500-070-7	3 - 7

HAZARD STATEMENTS:

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

PRECAUTIONARY STATEMENTS

Prevention:

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

Response:

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

21% of the mixture consists of components of unknown acute oral toxicity.

Contains 7% 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
reaction product: bisphenol-A-(epichlorhydrin)	(CAS-No.) 25068-38-6 (EC-No.) 500-033-5	30 - 40	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
2-METHYLOL-4,4'-ISOPROPYLIDENEDIPHENOL DIGLYCIDYL ETHER	(CAS-No.) 3188-83-8 (EC-No.) 221-688-0	10 - 20	Aquatic Chronic 2, H411
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	(CAS-No.) 25085-99-8	10 - 20	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Silica, vitreous	(CAS-No.) 60676-86-0 (EC-No.) 262-373-8	7 - 13	Substance with a national occupational exposure limit
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	(CAS-No.) 30583-72-3 (EC-No.) 500-070-7	3 - 7	Skin Sens. 1, H317 Aquatic Chronic 3, H412
Siloxanes and Silicones, di-Me, reaction products with silica	(CAS-No.) 67762-90-7	3 - 7	Substance with a national occupational exposure limit
Oxide glass chemicals	(CAS-No.) 65997-17-3 (EC-No.) 266-046-0	1 - 5	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	1 - 5	Aquatic Chronic 3, H412 Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	(CAS-No.) 68413-24-1 (EC-No.) 500-210-7	1 - 5	Skin Sens. 1B, H317
Perlite, Expanded	(CAS-No.) 93763-70-3	1 - 5	Substance with a national occupational exposure limit
METHYL METHACRYLATE/BUTADIENE/STYRENE COPOLYMER	Trade Secret	1 - 3	Substance not classified as hazardous

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
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

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

4.2. Most important symptoms and effects, both acute and delayed
The most important symptoms and effects based on the 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.

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 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
Not applicable.

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
Silica, vitreous	60676-86-0	UK HSC	TWA(as respirable dust):0.08 mg/m³	
Glass, oxide, chemicals	65997-17-3	UK HSC	TWA(as fiber):5 mg/m3(1 fibers/ml)	
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 HSC	TWA(as respirable dust):2.4 mg/m3;TWA(as inhalable dust):6 mg/m3	
DUST, INERT OR NUISANCE	93763-70-3	UK HSC	TWA(as respirable dust):4 mg/m3;TWA(as inhalable dust):10 mg/m3	

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

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

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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	Fawn
Odor	Epoxy
Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	*No data available.*

Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Flash point	115 ºC [*Test Method:*Closed Cup]
Autoignition temperature	*Not applicable.*
Decomposition temperature	*Not applicable.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	300,000 - 600,000 mm²/sec [@ 23 ºC]
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*Not applicable.*
Vapour pressure	*No data available.*
Density	1.01 - 1.13 g/cm3
Relative density	1.01 - 1.13 [*Ref Std:*WATER=1]
Relative Vapour Density	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	<=0.1 % weight
Evaporation rate	*No data available.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
None known.

10.5 Incompatible materials
None known.

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

Eye contact
Moderate eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 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
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	Rat	LD50 > 1,600 mg/kg
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Rat	LD50 > 1,000 mg/kg
Silica, vitreous	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silica, vitreous	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica, vitreous	Ingestion	Rat	LD50 > 5,110 mg/kg
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	Dermal	Rat	LD50 > 2,000 mg/kg
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	Ingestion	Rat	LD50 > 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
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
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
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Dermal	Rabbit	LD50 > 2,000 mg/kg
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Rat	LD50 > 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-	Rat	LC50 > 5.19 mg/l

	Dust/Mist (4 hours)		
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Rat	LD50 1,098 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
reaction product: bisphenol-A-(epichlorhydrin)	Rabbit	Mild irritant
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Rabbit	Mild irritant
Silica, vitreous	Rabbit	No significant irritation
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	Rabbit	Minimal irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In vitro data	No significant irritation
Oxide glass chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	In vitro data	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
reaction product: bisphenol-A-(epichlorhydrin)	Rabbit	Moderate irritant
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Rabbit	Moderate irritant
Silica, vitreous	Rabbit	No significant irritation
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	Rabbit	Mild irritant
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In vitro data	No significant irritation
Oxide glass chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	In vitro data	No significant irritation

Skin Sensitisation

Name	Species	Value
reaction product: bisphenol-A-(epichlorhydrin)	Human and animal	Sensitising
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Human and animal	Sensitising
Silica, vitreous	Human and animal	Not classified
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	Mouse	Sensitising
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Guinea pig	Sensitising
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Mouse	Sensitising

Respiratory Sensitisation

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

2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
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
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	In vivo	Not mutagenic
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Silica, vitreous	In Vitro	Not mutagenic
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	In vivo	Not mutagenic
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	In Vitro	Not mutagenic
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

Carcinogenicity

Name	Route	Species	Value
reaction product: bisphenol-A-(epichlorhydrin)	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Silica, vitreous	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Oxide glass chemicals	Inhalation	Multiple animal species	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
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
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
Silica, vitreous	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica, vitreous	Inhalation	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica, vitreous	Ingestion	Not classified for development	Rat	NOAEL	during

				1,350 mg/kg/day	organogenesis
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	Ingestion	Not classified for development	Rat	NOAEL 300 mg/kg/day	during gestation
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
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	48 days
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	Not classified for development	Rat	NOAEL 62.5 mg/kg/day	premating into lactation
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

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 system | liver | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	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
Silica, vitreous	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure

Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 100 mg/kg/day	90 days
Epichlorohydrin-4,4'-(1-Methylethylidene)Biscyclohexanol Polymer	Ingestion	heart | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | nervous system | vascular system | skin | muscles | eyes | respiratory system	Not classified	Rat	NOAEL 600 mg/kg/day	90 days
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	gastrointestinal tract	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 62.5 mg/kg/day	90 days
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	Ingestion	endocrine system | hematopoietic system | kidney and/or bladder | heart | skin | liver | immune system | muscles | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
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

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
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
reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Water flea	Experimental	21 days	NOEC	0.3 mg/l
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Green algae	Estimated	72 hours	EC50	>11 mg/l
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Water flea	Estimated	48 hours	EC50	1.8 mg/l
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Green algae	Estimated	72 hours	NOEC	4.2 mg/l
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Water flea	Estimated	21 days	NOEC	0.3 mg/l
2-METHYLOL-4,4'-ISOPROPYLIDENEDIPHENOL DIGLYCIDYL ETHER	3188-83-8	Green algae	Estimated	72 hours	EC50	>11 mg/l
2-METHYLOL-4,4'-ISOPROPYLIDENEDIPHENOL DIGLYCIDYL ETHER	3188-83-8	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
2-METHYLOL-4,4'-ISOPROPYLIDENEDIPHENOL DIGLYCIDYL ETHER	3188-83-8	Water flea	Estimated	48 hours	EC50	1.8 mg/l
2-METHYLOL-4,4'-ISOPROPYLIDENEDIPHENOL DIGLYCIDYL ETHER	3188-83-8	Green algae	Estimated	72 hours	NOEC	4.2 mg/l
2-METHYLOL-4,4'-ISOPROPYLIDENEDIPHENOL DIGLYCIDYL	3188-83-8	Water flea	Estimated	21 days	NOEC	0.3 mg/l

ETHER						
Silica, vitreous	60676-86-0	Common Carp	Experimental	72 hours	LC50	>10,000 mg/l
Epichlorohydrin-4,4'-(1-Methylethylidene) Biscyclohexanol Polymer	30583-72-3	Activated sludge	Experimental	3 hours	NOEC	1,000 mg/l
Epichlorohydrin-4,4'-(1-Methylethylidene) Biscyclohexanol Polymer	30583-72-3	Green algae	Experimental	72 hours	EC50	>100 mg/l
Epichlorohydrin-4,4'-(1-Methylethylidene) Biscyclohexanol Polymer	30583-72-3	Rainbow trout	Experimental	96 hours	LC50	11.5 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
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
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	68413-24-1	Activated sludge	Experimental	3 hours	EC50	1,000 mg/l
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	68413-24-1	Green algae	Experimental	72 hours	EL50	>100 mg/l
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	68413-24-1	Water flea	Experimental	48 hours	EL50	>100 mg/l
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	68413-24-1	Zebra Fish	Experimental	96 hours	LL50	>100 mg/l
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	68413-24-1	Green algae	Experimental	72 hours	NOEL	100 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
Perlite, Expanded	93763-70-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
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)	
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Estimated Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Estimated Hydrolysis		Hydrolytic half-life	4.9 days (t 1/2)	
2-METHYLOL-4,4'-ISOPROPYLIDENEDIPHENOL DIGLYCIDYL ETHER	3188-83-8	Estimated Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
2-METHYLOL-4,4'-ISOPROPYLIDENEDIPHENOL DIGLYCIDYL ETHER	3188-83-8	Estimated Hydrolysis		Hydrolytic half-life	117 hours (t 1/2)	
Silica, vitreous	60676-86-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Epichlorohydrin-4,4'-(1-Methylethylidene) Biscyclohexanol Polymer	30583-72-3	Experimental Biodegradation	28 days	BOD	0.1 %BOD/ThOD	OECD 301D - Closed bottle test
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	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
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	68413-24-1	Experimental Biodegradation	28 days	CO2 evolution	25.6 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Oxide glass chemicals	65997-17-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Perlite, Expanded	93763-70-3	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

reaction product: bisphenol-A-(epichlorhydrin)	25068-38-6	Experimental Bioconcentration		Log Kow	3.242	
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	25085-99-8	Estimated Bioconcentration		Log Kow	3.242	
2-METHYLOL-4,4'-ISOPROPYLIDENEDIPHENOL DIGLYCIDYL ETHER	3188-83-8	Estimated Bioconcentration		Log Kow	3.242	
Silica, vitreous	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Epichlorohydrin-4,4'-(1-Methylethylidene) Biscyclohexanol Polymer	30583-72-3	Experimental Bioconcentration		Log Kow	3.84	
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
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Estimated Bioconcentration		Bioaccumulation factor	3	
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	68413-24-1	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
Perlite, Expanded	93763-70-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
2-METHYLOL-4,4'-ISOPROPYLIDENEDIPHENOL DIGLYCIDYL ETHER	3188-83-8	Estimated Mobility in Soil	Koc	970 l/kg	Episuite™
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	Estimated Mobility in Soil	Koc	57 l/kg	Episuite™
Cashew, nutshell liquid, oligomeric reaction products with 1-chloro-2,3-epoxypropane	68413-24-1	Experimental Mobility in Soil	Koc	430,000 l/kg	OECD 121 Estim. of Koc by HPLC

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.(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)
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. 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.

COMAH Regulation, SI 2015/483
Seveso hazard categories, Annex 1, Part 1
None

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, 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

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

Revision information:
GB Section 02: CLP Ingredient table information was added.

GB Section 02: Other hazards phrase information was added.
GB Section 04: First Aid - Symptoms and Effects (GB CLP) information was added.
GB Section 04: Information on toxicological effects information was added.
GB Section 12: Classification Warning information was added.
GB Section 15: Chemical Safety Assessment information was added.
GBSDS Section 14 Transport in bulk - Main Heading information was added.
GBSDS Section 14 UN Number information was added.
CLP: Ingredient table information was deleted.
Label: CLP Percent Unknown information was deleted.
Section 02: Label Elements: GB Percent Unknown information was added.
Section 2: Other hazards phrase information was deleted.
Section 3: Composition/ Information of ingredients table information was added.
Section 3: Composition/ Information of ingredients table information was deleted.
Section 03: SCL table information was added.
Section 03: SCL table information was deleted.
Section 04: First Aid - Symptoms and Effects (CLP) information was deleted.
Section 04: Information on toxicological effects information was deleted.
Section 9: Vapour density value information was modified.
Section 11: Classification disclaimer information was deleted.
Section 11: GB Classification disclaimer information was added.
Section 11: GB No endocrine disruptor information available warning information was added.
Section 11: No endocrine disruptor information available warning information was deleted.
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: 12.6. Endocrine Disrupting Properties information was deleted.
Section 12: 12.6. Other adverse effects information was added.
Section 12: 12.7. Other adverse effects information was deleted.
Section 12: Classification Warning information was deleted.
Section 12: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
Prints No Data if Adverse effects information is not present information was deleted.
Section 12: No endocrine disruptor information available warning information was added.
Section 12: No endocrine disruptor information available warning information was deleted.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential 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 Hazardous/Not Hazardous for Transportation 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 Packing Group – Regulation Data information was modified.
Section 14 Proper Shipping Name information was modified.
Section 14 Segregation – 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 deleted.
Section 14 Transport Not Permitted – Main Heading information was deleted.
Section 14 Transport Not Permitted – Regulation Data information was deleted.
Section 14 Tunnel Code – Main Heading information was deleted.
Section 14 Tunnel Code – Regulation Data information was deleted.
Section 14 UN Number Column data information was modified.
Section 14 UN Number information was deleted.
Section 14: Transportation classification information was deleted.
Section 15: Chemical Safety Assessment information was deleted.

Section 15: Seveso Substance Text information was added.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was added.
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was deleted.
Section 16: Web address information was added.
Section 16: Web address information was deleted.
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:	36-8086-5	**Version number:**	2.05
Revision date:	05/06/2023	**Supersedes date:**	05/05/2023

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
PN 37455FC Epoxy Metal Filler, Part A

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

Identified uses
Professional

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 1B - Skin Corr. 1B; H314
Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336
Hazardous to the Aquatic Environment (Acute), Category 1 - Aquatic Acute 1; H400
Hazardous to the Aquatic Environment (Chronic), Category 1 - Aquatic Chronic 1; H410

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) |GHS09 (Environment) |

Pictograms

Ingredient	CAS Nbr	EC No.	% by Wt
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1		15 - 40
Polymeric amine	Trade Secret		20 - 30
Silica, vitreous	60676-86-0	262-373-8	7 - 13
Nitric acid, calcium salt, tetrahydrate	13477-34-4	233-332-1	3 - 7
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	216-032-5	2 - 6
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	224-207-2	< 5
Glass, oxide, chemicals	65997-17-3	266-046-0	1 - 5
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7		1 - 5
Perlite, Expanded	93763-70-3		1 - 3
salicylic acid	69-72-7	200-712-3	< 3
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	292-588-2	0.5 - 1.5
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	202-013-9	0.5 - 1.5
Carbon black	1333-86-4	215-609-9	< 0.5

HAZARD STATEMENTS:

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260A	Do not breathe vapours.
P273	Avoid release to the environment.
P280D	Wear protective gloves, protective clothing, and eye/face protection.

Response:

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

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

30% of the mixture consists of components of unknown acute oral toxicity.
30% of the mixture consists of components of unknown acute dermal toxicity.

Contains 34% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.
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
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	(CAS-No.) 68911-25-1	15 - 40	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1A, H317 STOT SE 3, H336 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
Polymeric amine	Trade Secret	20 - 30	Substance not classified as hazardous
Silica, vitreous	(CAS-No.) 60676-86-0 (EC-No.) 262-373-8	7 - 13	Substance with a national occupational exposure limit
Nitric acid, calcium salt, tetrahydrate	(CAS-No.) 13477-34-4 (EC-No.) 233-332-1	3 - 7	Acute Tox. 4, H302 Eye Dam. 1, H318
m-Xylene-.alpha.alpha'.-diamine	(CAS-No.) 1477-55-0 (EC-No.) 216-032-5	2 - 6	Acute Tox. 4, H332 Acute Tox. 4, H302 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Glass, oxide, chemicals	(CAS-No.) 65997-17-3 (EC-No.) 266-046-0	1 - 5	Substance with a national occupational exposure limit
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	(CAS-No.) 4246-51-9 (EC-No.) 224-207-2	< 5	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317
Siloxanes and Silicones, di-Me, reaction products with silica	(CAS-No.) 67762-90-7	1 - 5	Substance with a national occupational exposure limit
salicylic acid	(CAS-No.) 69-72-7 (EC-No.) 200-712-3	< 3	Acute Tox. 4, H302 Eye Dam. 1, H318 Repr. 2, H361d

Perlite, Expanded	(CAS-No.) 93763-70-3	1 - 3	Substance not classified as hazardous
Amines, polyethylenepoly-, triethylenetetramine fraction	(CAS-No.) 90640-67-8 (EC-No.) 292-588-2	0.5 - 1.5	Aquatic Chronic 3, H412 Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Corr. 1B, H314 Skin Sens. 1, H317
2,4,6-tris(dimethylaminomethyl)phenol	(CAS-No.) 90-72-2 (EC-No.) 202-013-9	0.5 - 1.5	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318
Carbon black	(CAS-No.) 1333-86-4 (EC-No.) 215-609-9	< 0.5	Substance with a national occupational exposure limit

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

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

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

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

The most important symptoms and effects based on the GB CLP classification include:
Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). Allergic skin reaction (redness, swelling, blistering, and itching). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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
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
Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. Store away from acids.

7.3. Specific end use(s)
See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Carbon black	1333-86-4	UK HSC	TWA: 3.5 mg/m³; STEL: 7 mg/m³	

Silica, vitreous	60676-86-0	UK HSC	TWA(as respirable dust):0.08 mg/m³
Glass, oxide, chemicals	65997-17-3	UK HSC	TWA(as fiber):5 mg/m3(1 fibers/ml)
Glass, oxide, 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 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	Black
Odor	Amine
Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	*No data available.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Flash point	98 ºC [*Test Method:*Estimated] [*Details:*Based on raw material data]
Autoignition temperature	*Not applicable.*
Decomposition temperature	*Not applicable.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	200,000 - 600,000 mm²/sec [@ 23 ºC]
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*Not applicable.*
Vapour pressure	*No data available.*
Density	0.96 - 1.08 g/m³
Relative density	0.96 - 1.08 [*Ref Std:*WATER=1]
Relative Vapour Density	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	<=0.1 % weight
Evaporation rate	*No data available.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
None known.

10.5 Incompatible materials
None known.

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. May cause additional health effects (see below).

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

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

Ingestion
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. Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

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

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

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

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Dermal	Rat	LD50 > 2,000 mg/kg
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Rat	LD50 > 2,000 mg/kg
Silica, vitreous	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silica, vitreous	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica, vitreous	Ingestion	Rat	LD50 > 5,110 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
m-Xylene-.alpha.alpha'.-diamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
m-Xylene-.alpha.alpha'.-diamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 1.2 mg/l
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Rat	LD50 980 mg/kg
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Dermal	Rabbit	LD50 2,525 mg/kg
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Rat	LD50 2,850 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
Glass, oxide, chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Glass, oxide, chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
salicylic acid	Dermal	Rat	LD50 > 2,000 mg/kg
salicylic acid	Ingestion	Rat	LD50 891 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
Amines, polyethylenepoly-, triethylenetetramine fraction	Dermal	Rabbit	LD50 1,465 mg/kg
Amines, polyethylenepoly-, triethylenetetramine fraction	Ingestion	Rat	LD50 1,591 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
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value

Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Rat	Irritant
Silica, vitreous	Rabbit	No significant irritation
Nitric acid, calcium salt, tetrahydrate	similar compounds	No significant irritation
m-Xylene-.alpha.alpha'.-diamine	Rat	Corrosive
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Rabbit	Corrosive
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Glass, oxide, chemicals	Professional judgement	No significant irritation
salicylic acid	Rabbit	No significant irritation
Amines, polyethylenepoly-, triethylenetetramine fraction	Rabbit	Corrosive
2,4,6-tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Carbon black	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	In vitro data	Severe irritant
Silica, vitreous	Rabbit	No significant irritation
Nitric acid, calcium salt, tetrahydrate	Rabbit	Corrosive
m-Xylene-.alpha.alpha'.-diamine	Rabbit	Corrosive
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Rabbit	Corrosive
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Glass, oxide, chemicals	Professional judgement	No significant irritation
salicylic acid	Rabbit	Corrosive
Amines, polyethylenepoly-, triethylenetetramine fraction	Rabbit	Corrosive
2,4,6-tris(dimethylaminomethyl)phenol	Rabbit	Corrosive
Carbon black	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Guinea pig	Sensitising
Silica, vitreous	Human and animal	Not classified
Nitric acid, calcium salt, tetrahydrate	similar compounds	Not classified
m-Xylene-.alpha.alpha'.-diamine	Guinea pig	Sensitising
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Professional judgement	Sensitising
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified
salicylic acid	Mouse	Not classified
Amines, polyethylenepoly-, triethylenetetramine fraction	Guinea pig	Sensitising
2,4,6-tris(dimethylaminomethyl)phenol	Guinea pig	Not classified

Photosensitisation

Name	Species	Value
salicylic acid	Mouse	Not sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	In Vitro	Not mutagenic
Silica, vitreous	In Vitro	Not mutagenic
Nitric acid, calcium salt, tetrahydrate	In Vitro	Not mutagenic
m-Xylene-.alpha.alpha'.-diamine	In Vitro	Not mutagenic
m-Xylene-.alpha.alpha'.-diamine	In vivo	Not mutagenic
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	In Vitro	Not mutagenic
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
Glass, oxide, chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
salicylic acid	In Vitro	Not mutagenic
salicylic acid	In vivo	Not mutagenic
Amines, polyethylenepoly-, triethylenetetramine fraction	In vivo	Not mutagenic
Amines, polyethylenepoly-, triethylenetetramine fraction	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,4,6-tris(dimethylaminomethyl)phenol	In Vitro	Not mutagenic
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Silica, vitreous	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Glass, oxide, chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Amines, polyethylenepoly-, triethylenetetramine fraction	Dermal	Mouse	Not carcinogenic
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	29 days
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Silica, vitreous	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica, vitreous	Inhalation	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica, vitreous	Ingestion	Not classified for development	Rat	NOAEL	during

				1,350 mg/kg/day	organogenesis
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
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	1 generation
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg	1 generation
m-Xylene-.alpha.alpha'.-diamine	Ingestion	Not classified for development	Rat	NOAEL 450 mg/kg/day	1 generation
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Not classified for female reproduction	Rat	NOAEL 600 mg/kg/day	premating into lactation
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Not classified for male reproduction	Rat	NOAEL 600 mg/kg/day	59 days
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Ingestion	Not classified for development	Rat	NOAEL 600 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
salicylic acid	Ingestion	Toxic to development	Rat	NOAEL 75 mg/kg/day	during organogenesis
Amines, polyethylenepoly-, triethylenetetramine fraction	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	Irritation Positive	
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	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
m-Xylene-.alpha.alpha'.-diamine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not avaliable	
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Amines, polyethylenepoly-, triethylenetetramine fraction	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	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	Ingestion	heart | skin | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | muscles | nervous system | eyes | kidney and/or bladder | respiratory system | vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
Silica, vitreous	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
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 compounds	NOAEL 1,500 mg/kg/day	28 days
m-Xylene-.alpha.alpha'.-diamine	Ingestion	endocrine system | blood | bone marrow	Not classified	Rat	NOAEL 600 mg/kg/day	28 days
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	Ingestion	gastrointestinal tract | heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | liver | immune system | muscles | nervous system | eyes | kidney and/or bladder | respiratory system | vascular system	Not classified	Rat	NOAEL 600 mg/kg/day	59 days
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Glass, oxide, chemicals	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
salicylic acid	Ingestion	liver	Not classified	Rat	NOAEL 500 mg/kg/day	3 days
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
Carbon black	Inhalation	pneumoconiosis	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
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Fathead minnow	Experimental	96 hours	LL50	2.16 mg/l
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Green algae	Experimental	72 hours	EL50	0.43 mg/l
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Water flea	Experimental	48 hours	EL50	0.57 mg/l
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Green algae	Experimental	72 hours	NOEL	0.28 mg/l
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Activated sludge	Experimental	3 hours	EC50	410.3 mg/l
Silica, vitreous	60676-86-0	Common Carp	Experimental	72 hours	LC50	>10,000 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
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Activated sludge	Experimental	30 minutes	EC50	>1,000 mg/l
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Bacteria	Experimental	16 hours	EC10	24 mg/l
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Green algae	Experimental	72 hours	ErC50	28 mg/l
m-Xylene-.alpha.alph	1477-55-0	Medaka	Experimental	96 hours	LC50	87.6 mg/l

a'.-diamine						
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Water flea	Experimental	48 hours	EC50	15.2 mg/l
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Green algae	Experimental	72 hours	NOEC	9.8 mg/l
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Water flea	Experimental	21 days	NOEC	4.7 mg/l
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Bacteria	Experimental	17 hours	EC50	4,000 mg/l
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Golden Orfe	Experimental	96 hours	LC50	>1,000 mg/l
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Green algae	Experimental	72 hours	EC50	>500 mg/l
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Water flea	Experimental	48 hours	EC50	218.16 mg/l
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Green algae	Experimental	72 hours	EC10	5.4 mg/l
Glass, oxide, chemicals	65997-17-3	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Glass, oxide, chemicals	65997-17-3	Water flea	Experimental	72 hours	EC50	>1,000 mg/l
Glass, oxide, chemicals	65997-17-3	Zebra Fish	Experimental	96 hours	LC50	>1,000 mg/l
Glass, oxide, chemicals	65997-17-3	Green algae	Experimental	72 hours	NOEC	>=1,000 mg/l
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
Perlite, Expanded	93763-70-3	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
salicylic acid	69-72-7	Green algae	Experimental	72 hours	EC50	>100 mg/l
salicylic acid	69-72-7	Medaka	Experimental	96 hours	LC50	>100 mg/l
salicylic acid	69-72-7	Water flea	Experimental	48 hours	EC50	870 mg/l
salicylic acid	69-72-7	Water flea	Experimental	21 days	NOEC	10 mg/l
salicylic acid	69-72-7	Activated sludge	Experimental	3 hours	EC50	>3,200
salicylic acid	69-72-7	Bacteria	Experimental	18 hours	EC10	465
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	Fathead minnow	Experimental	96 hours	LC50	330 mg/l
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	Green algae	Experimental	72 hours	ErC50	20 mg/l
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	Water flea	Experimental	48 hours	EC50	31.1 mg/l
Amines, polyethylenepoly-, triethylenetetramin	90640-67-8	Green algae	Experimental	72 hours	ErC10	1.34 mg/l

e fraction						
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	Water flea	Experimental	21 days	EC10	1.9 mg/l
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	Bacteria	Experimental	2 hours	EC50	15.7 mg/l
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	Redworm	Experimental	56 days	EC10	31.1 mg/kg (Dry Weight)
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	Soil microbes	Experimental	28 days	EC50	>100 mg/kg (Dry Weight)
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	N/A	Experimental	96 hours	LC50	718 mg/l
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Common Carp	Experimental	96 hours	LC50	>100 mg/l
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Green algae	Experimental	72 hours	EC50	46.7 mg/l
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Green algae	Experimental	72 hours	NOEC	6.44 mg/l
Carbon black	1333-86-4	Activated sludge	Experimental	3 hours	EC50	>=100 mg/l
Carbon black	1333-86-4	N/A	Data not available or insufficient for classification	N/A	N/A	N/A

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301F - Manometric respirometry
Silica, vitreous	60676-86-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Nitric acid, calcium salt, tetrahydrate	13477-34-4	Data not availbl-insufficient	N/A	N/A	N/A	N/A
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Experimental Biodegradation	28 days	CO2 evolution	49 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Experimental Aquatic Inherent Biodegrad.	28 days	BOD	22 %BOD/ThOD	OECD 302C - Modified MITI (II)
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Experimental Biodegradation	25 days	CO2 evolution	-8 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Estimated Photolysis		Photolytic half-life (in air)	2.96 hours (t 1/2)	
Glass, oxide, chemicals	65997-17-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Siloxanes and	67762-90-7	Data not availbl-	N/A	N/A	N/A	N/A

Silicones, di-Me, reaction products with silica		insufficient				
Perlite, Expanded	93763-70-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
salicylic acid	69-72-7	Experimental Biodegradation	14 days	BOD	88.1 %BOD/ThOD	OECD 301C - MITI test (I)
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	Experimental Aquatic Inherent Biodegrad.	84 days	Dissolv. Organic Carbon Deplet	20 %removal of DOC	OECD 302A - Modified SCAS Test
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Experimental Biodegradation	28 days	BOD	4 %BOD/ThOD	OECD 301D - Closed bottle test
Carbon black	1333-86-4	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
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Modeled Bioconcentration		Bioaccumulation factor	42	Catalogic™
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Modeled Bioconcentration		Log Kow	11.7	Episuite™
Silica, vitreous	60676-86-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Nitric acid, calcium salt, tetrahydrate	13477-34-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Experimental BCF - Fish	42 days	Bioaccumulation factor	<2.7	OECD305-Bioconcentration
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Extrapolated Bioconcentration		Log Kow	0.18	OECD 107 log Kow shke flsk mtd
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Experimental Bioconcentration		Log Kow	-1.25	
Glass, oxide, chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Perlite, Expanded	93763-70-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
salicylic acid	69-72-7	Experimental Bioconcentration		Log Kow	2.26	
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	Experimental Bioconcentration		Log Kow	<-2.0	
2,4,6-tris(dimethylaminomethyl)phenol	90-72-2	Experimental Bioconcentration		Log Kow	-0.66	830.7550 Part.Coef Shake Flask
Carbon black	1333-86-4	Data not available	N/A	N/A	N/A	N/A

		or insufficient for classification				

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Fatty acids, C18-unsaturated, dimers, polymers with 3,3'-oxybis(ethyleneoxy)bis(propylamine)	68911-25-1	Modeled Mobility in Soil	Koc	3,780,000,000 l/kg	
m-Xylene-.alpha.alpha'.-diamine	1477-55-0	Modeled Mobility in Soil	Koc	<1 l/kg	ACD/Labs ChemSketch™
3,3'-Oxybis(ethyleneoxy)bis(propylamine)	4246-51-9	Modeled Mobility in Soil	Koc	1 l/kg	ACD/Labs ChemSketch™
salicylic acid	69-72-7	Modeled Mobility in Soil	Koc	<1 l/kg	Episuite™
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	Experimental Mobility in Soil	Koc	1600-5000 l/kg	

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	UN3259	UN3259	UN3259

14.2 UN proper shipping name	AMINES, SOLID, CORROSIVE, N.O.S.(M-PHENYLENEBIS(METHYLAMINE))	AMINES, SOLID, CORROSIVE, N.O.S.(M-PHENYLENEBIS(METHYLAMINE))	AMINES, SOLID, CORROSIVE, N.O.S.(M-PHENYLENEBIS(METHYLAMINE) ; ALIPHATIC POLYMER DIAMINE)
14.3 Transport hazard class(es)	8	8	8
14.4 Packing group	II	II	II
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	C8	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	18 - ALKALIS

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
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	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.

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
E1 Hazardous to the Aquatic environment	100	200

Seveso named dangerous substances, Annex 1, Part 2
None

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

H302	Harmful if swallowed.
H312	Harmful 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.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very 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.
GB Section 02: Other hazards phrase information was modified.
GB Section 04: First Aid - Symptoms and Effects (GB CLP) information was modified.
Label: CLP Classification information was modified.
Section 02: Label Elements: GB Percent Unknown information was deleted.
Section 3: Composition/ Information of ingredients table information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Health Effects - Additional Information information was added.
Section 11: Health Effects - Inhalation information information was modified.
Section 15: Seveso Hazard Category Text 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.