Safety Data Sheet

Document group:	38-8795-7	**Version number:**	4.00
Revision date:	23/06/2023	**Supersedes date:**	12/12/2022

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

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

1.1. Product identifier
3M(tm) Scotch-Weld(tm) Structural Void Filling Compound EC-3460 HT/FST

Product Identification Numbers
UU-0096-3053-2

7100176150

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

Identified uses
Industrial use.

1.3. Details of the supplier of the safety data sheet
Address: 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone: +353 1 280 3555
E Mail: tox.uk@mmm.com
Website: www.3M.com

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

Industrial

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
CLP REGULATION (EC) No 1272/2008

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

CLASSIFICATION:

Serious Eye Damage/Eye Irritation, Category 1 - Eye Dam. 1; H318
Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334
Skin Sensitization, Category 1 - Skin Sens. 1; H317
Germ Cell Mutagenicity, Category 2 - Muta. 2; H341
Reproductive Toxicity, Category 2 - Repr. 2; H361fd
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

2.2. Label elements
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER.

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

Pictograms

Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	201-604-9	1 - 30
hexahydromethylphthalic anhydride	25550-51-0	247-094-1	10 - 30
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4		20 - 30
tetrahydro-4-methylphthalicanhydride	34090-76-1	251-823-9	< 5
Boron zinc hydroxide oxide	138265-88-0	235-804-2	1 - 5
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	216-823-5	1 - 3
Trichloro(N,N-dimethyloctylamine)boron	34762-90-8	252-200-4	< 0.3

HAZARD STATEMENTS:

H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P261B	Avoid breathing dust.
P280D	Wear protective gloves, protective clothing, and eye/face protection.

Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

Contains 2% 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]
Oxide glass chemicals	(CAS-No.) 65997-17-3 (EC-No.) 266-046-0	10 - 30	Substance with a national occupational exposure limit
Phenol-formaldehyde polymer, glycidyl ether	(CAS-No.) 28064-14-4	20 - 30	Skin Sens. 1, H317 Aquatic Chronic 2, H411
cyclohexane-1,2-dicarboxylic anhydride	(CAS-No.) 85-42-7 (EC-No.) 201-604-9 (REACH-No.) 01-2119486666-21	1 - 30	Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1A, H317 Nota C
hexahydromethylphthalic anhydride	(CAS-No.) 25550-51-0 (EC-No.) 247-094-1 (REACH-No.) 01-2119845474-33	10 - 30	Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 Nota C
Aluminium hydroxide	(CAS-No.) 21645-51-2 (EC-No.) 244-492-7	10 - 20	Substance with a national occupational exposure limit
tetrahydro-4-methylphthalicanhydride	(CAS-No.) 34090-76-1 (EC-No.) 251-823-9	< 5	Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 Nota C
Boron zinc hydroxide oxide	(CAS-No.) 138265-88-0 (EC-No.) 235-804-2 (REACH-No.) 01-2119691658-19	1 - 5	Eye Irrit. 2, H319 Muta. 2, H341 Repr. 2, H361df Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
red phosphorus	(CAS-No.) 7723-14-0 (EC-No.) 231-768-7 (REACH-No.) 01-2119489913-23	1 - 3	Flam. Sol. 1, H228 Aquatic Chronic 3, H412
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	1 - 3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Siloxanes and Silicones, di-Me, reaction	(CAS-No.) 67762-90-7	1 - 3	Substance with a national occupational

products with silica			exposure limit
Trichloro(N,N-dimethyloctylamine)boron	(CAS-No.) 34762-90-8 (EC-No.) 252-200-4	< 0.3	Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1 Skin Sens. 1B, H317 Repr. 2, H361df

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

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
bis-[4-(2,3-epoxipropoxi)phenyl]propane	(CAS-No.) 1675-54-3 (EC-No.) 216-823-5	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

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

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

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

4.2. Most important symptoms and effects, both acute and delayed
The most important symptoms and effects based on the CLP classification include:
Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

4.3. Indication of any immediate medical attention and special treatment required
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
When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus,tunic and trousers (leggings),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
For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from oxidising agents. Store away from amines.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
DUST, INERT OR NUISANCE	21645-51-2	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as	

			respirable dust)(8 hours):4 mg/m3
Mineral wool, with the exception of those specified elsewhere in this Annex	65997-17-3	Ireland OELs	TWA(8 hours):5 mg/m3(2 fiber/cc)
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	Ireland OELs	TWA(Total inhalable dust)(8 hours):6 mg/m3;TWA(as respirable dust)(8 hours):2.4 mg/m3
red phosphorus	7723-14-0	Ireland OELs	TWA(8 hours):0.1 mg/m3;STEL(15 minutes):0.3 mg/m3
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Ireland OELs	STEL(Inhalable)(15 minutes):0.005 mg/m3

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

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

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

8.2. Exposure controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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

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

Material	Thickness (mm)	Breakthrough Time

Polymer laminate	No data available	No data available

Applicable Norms/Standards
Use gloves tested to EN 374

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

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

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

Applicable Norms/Standards
Use a respirator conforming to EN 140 or EN 136: filter types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Colour	Brown
Odor	Low Odor
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	>=150 ºC
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	*No data available.*
Water solubility	*Not applicable.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	*Not applicable.*
Density	0.7 - 0.78 g/ml
Relative density	0.7 - 0.78
Relative Vapour Density	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

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

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Heat.

10.5 Incompatible materials
Amines.
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

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

Signs and Symptoms of Exposure

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

Inhalation
May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, 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
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. Dust created by cutting, grinding, sanding, or machining may cause eye irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion

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

Additional Health Effects:

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

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

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE >5 - =12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
cyclohexane-1,2-dicarboxylic anhydride	Dermal	Rabbit	LD50 > 2,000 mg/kg
cyclohexane-1,2-dicarboxylic anhydride	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.1 mg/l
cyclohexane-1,2-dicarboxylic anhydride	Ingestion	Rat	LD50 2,700 mg/kg
hexahydromethylphthalic anhydride	Ingestion	Rat	LD50 > 2,000 mg/kg
hexahydromethylphthalic anhydride	Dermal	similar compounds	LD50 > 2,000 mg/kg
Phenol-formaldehyde polymer, glycidyl ether	Dermal	Rabbit	LD50 > 6,000 mg/kg
Phenol-formaldehyde polymer, glycidyl ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Phenol-formaldehyde polymer, glycidyl ether	Ingestion	Rat	LD50 > 4,000 mg/kg
Oxide glass chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide glass chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Aluminium hydroxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium hydroxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminium hydroxide	Ingestion	Rat	LD50 > 5,000 mg/kg
tetrahydro-4-methylphthalicanhydride	Dermal	Rat	LD50 > 2,000 mg/kg
tetrahydro-4-methylphthalicanhydride	Ingestion	Rat	LD50 > 2,000 mg/kg
Boron zinc hydroxide oxide	Dermal	Rabbit	LD50 > 5,000 mg/kg
Boron zinc hydroxide oxide	Inhalation-Dust/Mist	Rat	LC50 > 4.95 mg/l
Boron zinc hydroxide oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Rat	LD50 > 1,600 mg/kg
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Rat	LD50 > 1,000 mg/kg
red phosphorus	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
red phosphorus	Ingestion	Rat	LD50 > 15,000 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

Trichloro(N,N-dimethyloctylamine)boron	Dermal	Rat	LD50 > 2,870 mg/kg
Trichloro(N,N-dimethyloctylamine)boron	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
cyclohexane-1,2-dicarboxylic anhydride	Rabbit	Minimal irritation
hexahydromethylphthalic anhydride	Rabbit	Mild irritant
Phenol-formaldehyde polymer, glycidyl ether	Rabbit	Minimal irritation
Oxide glass chemicals	Professional judgement	No significant irritation
Aluminium hydroxide	Rabbit	No significant irritation
tetrahydro-4-methylphthalicanhydride	Rabbit	Minimal irritation
Boron zinc hydroxide oxide	Rabbit	No significant irritation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Mild irritant
red phosphorus	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Trichloro(N,N-dimethyloctylamine)boron	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
cyclohexane-1,2-dicarboxylic anhydride	Rabbit	Corrosive
hexahydromethylphthalic anhydride	official classification	Corrosive
Phenol-formaldehyde polymer, glycidyl ether	Rabbit	Mild irritant
Oxide glass chemicals	Professional judgement	No significant irritation
Aluminium hydroxide	Rabbit	No significant irritation
tetrahydro-4-methylphthalicanhydride	official classification	Corrosive
Boron zinc hydroxide oxide	Rabbit	Severe irritant
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Rabbit	Moderate irritant
red phosphorus	Rabbit	No significant irritation
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
Trichloro(N,N-dimethyloctylamine)boron	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
cyclohexane-1,2-dicarboxylic anhydride	Guinea pig	Sensitising
hexahydromethylphthalic anhydride	Human	Sensitising
Phenol-formaldehyde polymer, glycidyl ether	Human and animal	Sensitising
Aluminium hydroxide	Guinea pig	Not classified
tetrahydro-4-methylphthalicanhydride	Human	Sensitising
Boron zinc hydroxide oxide	Guinea pig	Not classified
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Human and animal	Sensitising
red phosphorus	Guinea pig	Not classified

Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified
Trichloro(N,N-dimethyloctylamine)boron	Mouse	Sensitising

Respiratory Sensitisation

Name	Species	Value
cyclohexane-1,2-dicarboxylic anhydride	Human	Sensitising
hexahydromethylphthalic anhydride	Human	Sensitising
tetrahydro-4-methylphthalicanhydride	Human	Sensitising
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
cyclohexane-1,2-dicarboxylic anhydride	In Vitro	Not mutagenic
hexahydromethylphthalic anhydride	In Vitro	Not mutagenic
Phenol-formaldehyde polymer, glycidyl ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
Oxide glass chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
tetrahydro-4-methylphthalicanhydride	In Vitro	Not mutagenic
Boron zinc hydroxide oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Boron zinc hydroxide oxide	In vivo	Mutagenic
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In vivo	Not mutagenic
bis-[4-(2,3-epoxipropoxi)phenyl]propane	In Vitro	Some positive data exist, but the data are not sufficient for classification
red phosphorus	In Vitro	Not mutagenic
Siloxanes and Silicones, di-Me, reaction products with silica	In Vitro	Not mutagenic
Trichloro(N,N-dimethyloctylamine)boron	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Oxide glass chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Aluminium hydroxide	Not specified.	Multiple animal species	Not carcinogenic
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
hexahydromethylphthalic anhydride	Ingestion	Not classified for female reproduction	Rat	NOAEL 450 mg/kg/day	premating into lactation
hexahydromethylphthalic anhydride	Ingestion	Not classified for male reproduction	Rat	NOAEL 450 mg/kg/day	42 days
hexahydromethylphthalic anhydride	Ingestion	Not classified for development	Rat	NOAEL 460 mg/kg/day	during gestation
Aluminium hydroxide	Ingestion	Not classified for development	Rat	NOAEL 768 mg/kg/day	during organogenesis
tetrahydro-4-methylphthalicanhydride	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	premating into lactation
tetrahydro-4-methylphthalicanhydride	Ingestion	Not classified for male reproduction	Rat	NOAEL 300 mg/kg/day	49 days

tetrahydro-4-methylphthalicanhydride	Ingestion	Not classified for development	Rat	NOAEL 300 mg/kg/day	premating into lactation
Boron zinc hydroxide oxide	Ingestion	Toxic to male reproduction	Rat	NOAEL 100 mg/kg/day	92 days
Boron zinc hydroxide oxide	Ingestion	Toxic to development	Rat	LOAEL 100 mg/kg/day	during gestation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
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
Trichloro(N,N-dimethyloctylamine)boron	Ingestion	Toxic to female reproduction	Rat	NOAEL 300 mg/kg/day	premating into lactation
Trichloro(N,N-dimethyloctylamine)boron	Ingestion	Toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	43 days
Trichloro(N,N-dimethyloctylamine)boron	Ingestion	Toxic to 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
cyclohexane-1,2-dicarboxylic anhydride	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
hexahydromethylphthalic anhydride	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
tetrahydro-4-methylphthalicanhydride	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
Boron zinc hydroxide oxide	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
hexahydromethylphthalic anhydride	Ingestion	heart | endocrine system | hematopoietic system | liver | immune system | nervous system | eyes | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 450 mg/kg/day	90 days
Oxide glass chemicals	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
tetrahydro-4-methylphthalicanhydride	Ingestion	endocrine system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 300 mg/kg/day	38 days
tetrahydro-4-methylphthalicanhydride	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 100 mg/kg/day	38 days
tetrahydro-4-	Ingestion	heart |	Not classified	Rat	NOAEL 300	38 days

methylphthalicanhydride		hematopoietic system | immune system | nervous system | eyes | respiratory system			mg/kg/day	
Boron zinc hydroxide oxide	Inhalation	immune system | respiratory system | heart | endocrine system | hematopoietic system | liver | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 0.15 mg/l	2 weeks
Boron zinc hydroxide oxide	Ingestion	endocrine system | liver | kidney and/or bladder | heart | skin | bone, teeth, nails, and/or hair | hematopoietic system | immune system | nervous system | eyes | respiratory system | vascular system	Not classified	Rat	NOAEL 375 mg/kg/day	92 days
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
bis-[4-(2,3-epoxipropoxi)phenyl]propane	Ingestion	auditory system | heart | endocrine system | hematopoietic system | liver | eyes | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Trichloro(N,N-dimethyloctylamine)boron	Ingestion	endocrine system | liver | heart | skin | gastrointestinal tract | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | eyes | kidney and/or bladder | respiratory system | vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	43 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 EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Activated sludge	Experimental	3 hours	EC50	370 mg/l
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Green algae	Experimental	72 hours	ErC50	>100 mg/l
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Zebra Fish	Experimental	96 hours	LC50	>1,000 mg/l
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Green algae	Experimental	72 hours	NOEC	100 mg/l
hexahydromethylphthalic anhydride	25550-51-0	Green algae	Analogous Compound	72 hours	ErC50	135 mg/l
hexahydromethylphthalic anhydride	25550-51-0	Rainbow trout	Analogous Compound	96 hours	LC50	>100 mg/l
hexahydromethylphthalic anhydride	25550-51-0	Water flea	Analogous Compound	48 hours	EC50	>100 mg/l
hexahydromethylphthalic anhydride	25550-51-0	Green algae	Analogous Compound	72 hours	NOEC	32 mg/l
hexahydromethylphthalic anhydride	25550-51-0	Activated sludge	Analogous Compound	3 hours	EC50	218.8
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
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Golden Orfe	Experimental	96 hours	LC50	5.7 mg/l
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Water flea	Experimental	48 hours	EC50	3.5 mg/l
Aluminium hydroxide	21645-51-2	Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium hydroxide	21645-51-2	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium hydroxide	21645-51-2	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Aluminium hydroxide	21645-51-2	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
tetrahydro-4-methylphthalicanhydride	34090-76-1	Activated sludge	Analogous Compound	3 hours	EC50	69.87 mg/l
tetrahydro-4-methylphthalicanhydride	34090-76-1	Green algae	Analogous Compound	72 hours	ErC50	68 mg/l
tetrahydro-4-methylphthalicanhydride	34090-76-1	Medaka	Analogous Compound	96 hours	LC50	>100 mg/l
tetrahydro-4-methylphthalicanhydride	34090-76-1	Water flea	Analogous Compound	48 hours	EC50	130 mg/l
tetrahydro-4-methylphthalicanhydrid	34090-76-1	Green algae	Analogous Compound	72 hours	NOEC	27.5 mg/l

e						
tetrahydro-4-methylphthalicanhydride	34090-76-1	Water flea	Analogous Compound	21 days	NOEC	20 mg/l
Boron zinc hydroxide oxide	138265-88-0	Activated sludge	Estimated	4 hours	NOEC	0.33 mg/l
Boron zinc hydroxide oxide	138265-88-0	Green algae	Estimated	72 hours	IC50	0.45 mg/l
Boron zinc hydroxide oxide	138265-88-0	Rainbow trout	Estimated	96 hours	LC50	0.56 mg/l
Boron zinc hydroxide oxide	138265-88-0	Water flea	Estimated	48 hours	EC50	0.33 mg/l
Boron zinc hydroxide oxide	138265-88-0	Green algae	Estimated	72 hours	NOEC	0.02 mg/l
Boron zinc hydroxide oxide	138265-88-0	Invertebrate	Estimated	24 days	NOEC	0.02 mg/l
Boron zinc hydroxide oxide	138265-88-0	Rainbow trout	Estimated	25 days	NOEC	0.08 mg/l
Boron zinc hydroxide oxide	138265-88-0	Water flea	Estimated	21 days	NOEC	0.12 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Activated sludge	Analogous Compound	3 hours	IC50	>100 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Rainbow trout	Estimated	96 hours	LC50	2 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Water flea	Estimated	48 hours	EC50	1.8 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Green algae	Experimental	72 hours	ErC50	>11 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Green algae	Experimental	72 hours	NOEC	4.2 mg/l
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Water flea	Experimental	21 days	NOEC	0.3 mg/l
red phosphorus	7723-14-0	Activated sludge	Estimated	3 hours	NOEC	1,000 mg/l
red phosphorus	7723-14-0	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
red phosphorus	7723-14-0	Green algae	Experimental	72 hours	EL50	18.3 mg/l
red phosphorus	7723-14-0	Water flea	Experimental	48 hours	EL50	10.5 mg/l
red phosphorus	7723-14-0	Zebra Fish	Experimental	96 hours	EL50	2.5 mg/l
red phosphorus	7723-14-0	Green algae	Experimental	72 hours	EL10	6.6 mg/l
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
Trichloro(N,N-dimethyloctylamine)boron	34762-90-8	Bacteria	Experimental	16 hours	EC10	>10,000 mg/l
Trichloro(N,N-dimethyloctylamine)boron	34762-90-8	Common Carp	Experimental	96 hours	LC50	>100 mg/l
Trichloro(N,N-dimethyloctylamine)boron	34762-90-8	Green algae	Experimental	72 hours	ErC50	0.13 mg/l
Trichloro(N,N-dimethyloctylamine)boron	34762-90-8	Water flea	Experimental	48 hours	EC50	>0.75 mg/l

Trichloro(N,N-dimethyloctylamine)boron	34762-90-8	Green algae	Experimental	72 hours	NOEC	0.022 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	98 %removal of DOC	EC C.4.A. DOC Die-Away Test
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	<5 minutes (t 1/2)	EC C.7 Hydrolysis at pH
hexahydromethylphthalic anhydride	25550-51-0	Analogous Compound Biodegradation	28 days	BOD	2 %BOD/ThOD	OECD 301F - Manometric respirometry
hexahydromethylphthalic anhydride	25550-51-0	Analogous Compound Hydrolysis		Hydrolytic half-life	1.9 minutes (t 1/2)	EC C.7 Hydrolysis at pH
Oxide glass chemicals	65997-17-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Laboratory Biodegradation	28 days	CO2 evolution	10-16 %CO2 evolution/THCO2 evolution (does not pass 10-day window)	OECD 301B - Modified sturm or CO2
Aluminium hydroxide	21645-51-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
tetrahydro-4-methylphthalicanhydride	34090-76-1	Analogous Compound Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
tetrahydro-4-methylphthalicanhydride	34090-76-1	Analogous Compound Hydrolysis		Hydrolytic half-life	3.2 minutes (t 1/2)	OECD 111 Hydrolysis func of pH
Boron zinc hydroxide oxide	138265-88-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Biodegradation	28 days	BOD	5 %BOD/COD	OECD 301F - Manometric respirometry
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	117 hours (t 1/2)	OECD 111 Hydrolysis func of pH
red phosphorus	7723-14-0	Experimental Hydrolysis		Hydrolytic half-life	8.3 years (t 1/2)	
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Trichloro(N,N-dimethyloctylamine)boron	34762-90-8	Experimental Biodegradation	28 days	CO2 evolution	≤25 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Trichloro(N,N-dimethyloctylamine)boron	34762-90-8	Experimental Aquatic Inherent Biodegrad.	28 days	BOD	42 %BOD/ThOD	OECD 302C - Modified MITI (II)
Trichloro(N,N-dimethyloctylamine)boron	34762-90-8	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	10.3 hours (t 1/2)	OECD 111 Hydrolysis func of pH

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Hydrolysis product BCF - Fish	42 days	Bioaccumulation factor	≤2	OECD305-Bioconcentration
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Experimental Bioconcentration		Log Kow	1.59	830.7570 Part. Coef by LC
hexahydromethylphthalic anhydride	25550-51-0	Analogous Compound Bioconcentration		Log Kow	2.09	OECD 107 log Kow shke flsk mtd
Oxide glass chemicals	65997-17-3	Data not available	N/A	N/A	N/A	N/A

		or insufficient for classification				
Phenol-formaldehyde polymer, glycidyl ether	28064-14-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Aluminium hydroxide	21645-51-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
tetrahydro-4-methylphthalicanhydride	34090-76-1	Modeled Bioconcentration		Bioaccumulation factor	4.8	Catalogic™
tetrahydro-4-methylphthalicanhydride	34090-76-1	Experimental Bioconcentration		Log Kow	1.88	OECD 117 log Kow HPLC method
Boron zinc hydroxide oxide	138265-88-0	Estimated BCF - Fish	56 days	Bioaccumulation factor	242	OECD305-Bioconcentration
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Experimental Bioconcentration		Log Kow	3.242	OECD 117 log Kow HPLC method
red phosphorus	7723-14-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
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
Trichloro(N,N-dimethyloctylamine)boron	34762-90-8	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
cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Experimental Mobility in Soil	Koc	190 l/kg	EC C.19 Estim. of Koc by HPLC
tetrahydro-4-methylphthalicanhydride	34090-76-1	Modeled Mobility in Soil	Koc	10 l/kg	Episuite™
bis-[4-(2,3-epoxipropoxi)phenyl]propane	1675-54-3	Modeled Mobility in Soil	Koc	450 l/kg	Episuite™

12.5. Results of the PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

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

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

EU waste code (product as sold)

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

SECTION 14: Transportation information

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

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

SECTION 15: Regulatory information

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

Carcinogenicity

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

Authorization status under REACH:
The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

Ingredient	CAS Nbr
cyclohexane-1,2-dicarboxylic anhydride	85-42-7
hexahydromethylphthalic anhydride	25550-51-0

Authorization status: listed in the Candidate List of Substances of Very High Concern for Authorization

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

DIRECTIVE 2012/18/EU
Seveso hazard categories, Annex 1, Part 1

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

Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
red phosphorus	7723-14-0	50	200

Regulation (EU) No 649/2012
No chemicals listed

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

SECTION 16: Other information

List of relevant H statements

H228	Flammable solid.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H341	Suspected of causing genetic defects.
H361df	Suspected of damaging fertility. Suspected of damaging the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
No revision information

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

3M Ireland MSDSs are available at www.3M.com