Safety Data Sheet

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

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

1.1. Product identifier
3M™ Finesse-it™ Final Finish [105]

Product Identification Numbers
60-4402-4234-9

7100075470

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

Identified uses
Abrasive Product

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 aspiration hazard classification is not required due to the product's viscosity.

CLASSIFICATION:
This material is not classified as hazardous according to Regulation (EC) No. 1272/2008, as amended for Great Britain, on classification, labelling, and packaging of substances and mixtures.

2.2. Label elements
The retained CLP Regulation (EU) No 1272/2008 as amended for Great Britain
Not applicable

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH210	Safety data sheet available on request.
EUH208	Contains 1,2-benzisothiazol-3(2H)-one. | Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride. May produce an allergic reaction.

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
Water	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	45 - 60	Substance not classified as hazardous
Aluminium Oxide (non-fibrous)	(CAS-No.) 1344-28-1 (EC-No.) 215-691-6	10 - 20	Substance with a national occupational exposure limit
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	(EC-No.) 918-167-1	< 15	Flam. Liq. 3, H226 Aquatic Chronic 4, H413 Asp. Tox. 1, H304 EUH066
Glycerol	(CAS-No.) 56-81-5 (EC-No.) 200-289-5	5 - 15	Substance with a national occupational exposure limit
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	(EC-No.) 926-141-6	< 10	Asp. Tox. 1, H304 EUH066
White mineral oil (petroleum)	(CAS-No.) 8042-47-5 (EC-No.) 232-455-8	1 - 5	Asp. Tox. 1, H304
1,2-benzisothiazol-3(2H)-one	(CAS-No.) 2634-33-5 (EC-No.) 220-120-9	< 0.03	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 1, H410,M=1

Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	(EC-No.) 701-048-1	0.1 - 0.2	Skin Sens. 1B, H317
morpholine	(CAS-No.) 110-91-8 (EC-No.) 203-815-1	0.1 - 0.8	Flam. Liq. 3, H226 Acute Tox. 3, H311 Acute Tox. 4, H332 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Repr. 2, H361f

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

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
1,2-benzisothiazol-3(2H)-one	(CAS-No.) 2634-33-5 (EC-No.) 220-120-9	(C >= 0.05%) Skin Sens. 1, H317

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

Skin contact
Wash with soap and water. If signs/symptoms develop, get medical attention.

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

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

4.2. Most important symptoms and effects, both acute and delayed
The most important symptoms and effects based on the GB CLP classification include:
Toxic by eye contact.

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.

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
Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections
Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

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

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
morpholine	110-91-8	UK HSC	TWA: 36 mg/m³ (10 ppm); STEL: 72 mg/m³ (20 ppm)	SKIN
Aluminium Oxide (non-fibrous)	1344-28-1	UK HSC	TWA(as respirable dust):4 mg/m3;TWA(as inhalable dust):10 mg/m3	

Glycerol	56-81-5	UK HSC	TWA(as mist):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
None required.

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

When only incidental contact is anticipated, alternative glove material(s) may be used. If contact with the glove does occur, remove immediately and replace with a set of new gloves. For incidental contact, gloves made of the following material(s) may be used:Nitrile rubber.

Applicable Norms/Standards
Use gloves tested to EN 374

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:
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 136: filter types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Grey
Odor	Slight Solvent

Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	approximately 100 ºC
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Flash point	Flash point > 93 °C (200 °F)
Autoignition temperature	*Not applicable.*
Decomposition temperature	*No data available.*
pH	8.3 - 8.7
Kinematic Viscosity	14,451 mm²/sec
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	*No data available.*
Density	1 - 1.1 kg/l
Relative density	1.014 - 1.062 [*Ref Std:*WATER=1]
Relative Vapour Density	1 [*Ref Std:*AIR=1]

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	1 [*Ref Std:*ETHER=1]
Molecular weight	*No data available.*
Percent volatile	75.6 % weight [*Details:*Calculated including water]

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
None known.

10.5 Incompatible materials
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	Condition
Carbon monoxide	Not specified.
Carbon dioxide.	Not specified.

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.

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

Ingestion
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.

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-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Aluminium Oxide (non-fibrous)	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium Oxide (non-fibrous)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Aluminium Oxide (non-fibrous)	Ingestion	Rat	LD50 > 5,000 mg/kg
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Inhalation-Vapour	Professional judgement	LC50 estimated to be 20 - 50 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Dermal	Rabbit	LD50 > 5,000 mg/kg
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Ingestion	Rat	LD50 > 5,000 mg/kg
Glycerol	Dermal	Rabbit	LD50 estimated to be > 5,000 mg/kg
Glycerol	Ingestion	Rat	LD50 > 5,000 mg/kg
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Inhalation-Vapour	Professional judgement	LC50 estimated to be 20 - 50 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Dermal	Rabbit	LD50 > 5,000 mg/kg
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Ingestion	Rat	LD50 > 5,000 mg/kg
White mineral oil (petroleum)	Dermal	Rabbit	LD50 > 2,000 mg/kg

White mineral oil (petroleum)	Ingestion	Rat	LD50 > 5,000 mg/kg
morpholine	Dermal	Rabbit	LD50 500 mg/kg
morpholine	Inhalation-Vapour	Rat	LC50 estimated to be 10 - 20 mg/l
morpholine	Ingestion	Rat	LD50 1,680 mg/kg
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	Ingestion	Rat	LD50 > 5,385 mg/kg
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
1,2-benzisothiazol-3(2H)-one	Dermal	Rat	LD50 > 2,000 mg/kg
1,2-benzisothiazol-3(2H)-one	Ingestion	Rat	LD50 454 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Aluminium Oxide (non-fibrous)	Rabbit	No significant irritation
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Rabbit	Mild irritant
Glycerol	Rabbit	No significant irritation
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Rabbit	Minimal irritation
White mineral oil (petroleum)	Rabbit	No significant irritation
morpholine	Rabbit	Corrosive
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	Rabbit	No significant irritation
1,2-benzisothiazol-3(2H)-one	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Aluminium Oxide (non-fibrous)	Rabbit	No significant irritation
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Rabbit	Mild irritant
Glycerol	Rabbit	No significant irritation
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Rabbit	Mild irritant
White mineral oil (petroleum)	Rabbit	Mild irritant
morpholine	Rabbit	Corrosive
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	Rabbit	No significant irritation
1,2-benzisothiazol-3(2H)-one	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Guinea pig	Not classified
Glycerol	Guinea pig	Not classified
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Guinea pig	Not classified
White mineral oil (petroleum)	Guinea pig	Not classified
morpholine	Guinea pig	Not classified
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	Mouse	Sensitising
1,2-benzisothiazol-3(2H)-one	Guinea pig	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
Aluminium Oxide (non-fibrous)	In Vitro	Not mutagenic
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	In Vitro	Not mutagenic
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	In vivo	Not mutagenic
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	In Vitro	Not mutagenic
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	In vivo	Not mutagenic
White mineral oil (petroleum)	In Vitro	Not mutagenic
morpholine	In Vitro	Some positive data exist, but the data are not sufficient for classification
morpholine	In vivo	Some positive data exist, but the data are not sufficient for classification
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	In Vitro	Not mutagenic
1,2-benzisothiazol-3(2H)-one	In vivo	Not mutagenic
1,2-benzisothiazol-3(2H)-one	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Aluminium Oxide (non-fibrous)	Inhalation	Rat	Not carcinogenic
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Not specified.	Not available	Not carcinogenic
Glycerol	Ingestion	Mouse	Some positive data exist, but the data are not sufficient for classification
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Not specified.	Not available	Not carcinogenic
White mineral oil (petroleum)	Dermal	Mouse	Not carcinogenic
White mineral oil (petroleum)	Inhalation	Multiple animal species	Not carcinogenic
morpholine	Ingestion	Multiple animal species	Not carcinogenic
morpholine	Inhalation	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Not specified.	Not classified for female reproduction	Rat	NOAEL Not available	premating & during gestation
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Not specified.	Not classified for male reproduction	Rat	NOAEL Not available	28 days
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Not specified.	Not classified for development	Rat	NOAEL Not available	during gestation
Glycerol	Ingestion	Not classified for female reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Glycerol	Ingestion	Not classified for male reproduction	Rat	NOAEL 2,000 mg/kg/day	2 generation
Glycerol	Ingestion	Not classified for development	Rat	NOAEL 2,000 mg/kg/day	2 generation
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Not specified.	Not classified for female reproduction	Rat	NOAEL Not available	1 generation
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Not specified.	Not classified for male reproduction	Rat	NOAEL Not available	1 generation
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Not specified.	Not classified for development	Rat	NOAEL Not available	1 generation
White mineral oil (petroleum)	Ingestion	Not classified for female reproduction	Rat	NOAEL 4,350	13 weeks

				mg/kg/day	
White mineral oil (petroleum)	Ingestion	Not classified for male reproduction	Rat	NOAEL 4,350 mg/kg/day	13 weeks
White mineral oil (petroleum)	Ingestion	Not classified for development	Rat	NOAEL 4,350 mg/kg/day	during gestation
morpholine	Ingestion	Not classified for development		NA	
morpholine	Ingestion	Toxic to male reproduction	similar compounds	NOAEL 60 mg/kg/day	2 generation
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	gestation into lactation
1,2-benzisothiazol-3(2H)-one	Ingestion	Not classified for female reproduction	Rat	NOAEL 112 mg/kg/day	2 generation
1,2-benzisothiazol-3(2H)-one	Ingestion	Not classified for male reproduction	Rat	NOAEL 112 mg/kg/day	2 generation
1,2-benzisothiazol-3(2H)-one	Ingestion	Not classified for development	Rat	NOAEL 112 mg/kg/day	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
morpholine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
1,2-benzisothiazol-3(2H)-one	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
Aluminium Oxide (non-fibrous)	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Aluminium Oxide (non-fibrous)	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Glycerol	Inhalation	respiratory system | heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 3.91 mg/l	14 days
Glycerol	Ingestion	endocrine system | hematopoietic system | liver | kidney and/or bladder	Not classified	Rat	NOAEL 10,000 mg/kg/day	2 years
White mineral oil (petroleum)	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,381 mg/kg/day	90 days
White mineral oil (petroleum)	Ingestion	liver | immune system	Not classified	Rat	NOAEL 1,336 mg/kg/day	90 days
morpholine	Dermal	liver | kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Guinea pig	LOAEL 900 mg/kg/day	13 days
morpholine	Dermal	hematopoietic system	Not classified	Guinea pig	NOAEL 900 mg/kg/day	13 days

morpholine	Inhalation	eyes	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
morpholine	Inhalation	pulmonary fibrosis	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.09 mg/l	13 weeks
morpholine	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 64 mg/l	5 days
morpholine	Inhalation	liver	Not classified	Rat	LOAEL 64 mg/l	5 days
morpholine	Inhalation	heart | endocrine system	Not classified	Rat	NOAEL 0.9 mg/l	13 weeks
morpholine	Inhalation	gastrointestinal tract | nervous system	Not classified	Rat	NOAEL 0.53 mg/l	104 weeks
morpholine	Ingestion	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 160 mg/kg/day	30 days
morpholine	Ingestion	liver | respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 160 mg/kg/day	30 days
morpholine	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 800 mg/kg/day	30 days
morpholine	Ingestion	endocrine system	Not classified	Rat	NOAEL 323 mg/kg/day	4 weeks
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	Ingestion	hematopoietic system | heart | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | liver | immune system | muscles | nervous system | eyes | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	35 days
1,2-benzisothiazol-3(2H)-one	Ingestion	liver | hematopoietic system | eyes | kidney and/or bladder | respiratory system	Not classified	Rat	NOAEL 322 mg/kg/day	90 days
1,2-benzisothiazol-3(2H)-one	Ingestion	heart | endocrine system | nervous system	Not classified	Rat	NOAEL 150 mg/kg/day	28 days

Aspiration Hazard

Name	Value
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Aspiration hazard
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Aspiration hazard
White mineral oil (petroleum)	Aspiration hazard

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

11.2. Information on other hazards

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

SECTION 12: Ecological information

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

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Aluminium Oxide (non-fibrous)	1344-28-1	N/A	Experimental	96 hours	LC50	>100 mg/l
Aluminium Oxide (non-fibrous)	1344-28-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Aluminium Oxide (non-fibrous)	1344-28-1	Water flea	Experimental	48 hours	LC50	>100 mg/l
Aluminium Oxide (non-fibrous)	1344-28-1	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Glycerol	56-81-5	Bacteria	Experimental	16 hours	NOEC	10,000 mg/l
Glycerol	56-81-5	Rainbow trout	Experimental	96 hours	LC50	54,000 mg/l
Glycerol	56-81-5	Water flea	Experimental	48 hours	LC50	1,955 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Green algae	Analogous Compound	72 hours	EL50	>1,000 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Rainbow trout	Analogous Compound	96 hours	LL50	>1,000 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Water flea	Analogous Compound	48 hours	EL50	>1,000 mg/l
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Green algae	Analogous Compound	72 hours	NOEL	1,000 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Green algae	Experimental	72 hours	EL50	>1,000 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Rainbow trout	Experimental	96 hours	LL50	>1,000 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Water flea	Experimental	48 hours	EL50	>1,000 mg/l
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Green algae	Experimental	72 hours	NOEL	1,000 mg/l
White mineral oil (petroleum)	8042-47-5	Water flea	Analogous Compound	48 hours	EL50	>100 mg/l
White mineral oil (petroleum)	8042-47-5	Bluegill	Experimental	96 hours	LL50	>100 mg/l
White mineral oil (petroleum)	8042-47-5	Green algae	Analogous Compound	72 hours	NOEL	100 mg/l
White mineral oil (petroleum)	8042-47-5	Water flea	Analogous Compound	21 days	NOEL	>100 mg/l
1,2-benzisothiazol-3(2H)-one	2634-33-5	Green algae	Experimental	72 hours	ErC50	0.11 mg/l
1,2-benzisothiazol-3(2H)-one	2634-33-5	Rainbow trout	Experimental	96 hours	LC50	1.6 mg/l

1,2-benzisothiazol-3(2H)-one	2634-33-5	Sheepshead Minnow	Experimental	96 hours	LC50	16.7 mg/l
1,2-benzisothiazol-3(2H)-one	2634-33-5	Water flea	Experimental	48 hours	EC50	2.9 mg/l
1,2-benzisothiazol-3(2H)-one	2634-33-5	Green algae	Experimental	72 hours	NOEC	0.0403 mg/l
1,2-benzisothiazol-3(2H)-one	2634-33-5	Activated sludge	Experimental	3 hours	EC50	12.8 mg/l
1,2-benzisothiazol-3(2H)-one	2634-33-5	Bobwhite quail	Experimental	14 days	LD50	617 mg per kg of bodyweight
1,2-benzisothiazol-3(2H)-one	2634-33-5	Cabbage	Experimental	14 days	EC50	200 mg/kg (Dry Weight)
1,2-benzisothiazol-3(2H)-one	2634-33-5	Redworm	Experimental	14 days	LC50	>410.6 mg/kg (Dry Weight)
1,2-benzisothiazol-3(2H)-one	2634-33-5	Soil microbes	Experimental	28 days	EC50	>811.5 mg/kg (Dry Weight)
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	701-048-1	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	701-048-1	Green algae	Experimental	72 hours	EL50	105 mg/l
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	701-048-1	Rainbow trout	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	701-048-1	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	701-048-1	Green algae	Experimental	72 hours	EL10	40 mg/l
morpholine	110-91-8	Activated sludge	Experimental	30 minutes	EC20	>1,000 mg/l
morpholine	110-91-8	Fish	Experimental	96 hours	LC50	100 mg/l
morpholine	110-91-8	Green algae	Experimental	96 hours	ErC50	28 mg/l

morpholine	110-91-8	Rainbow trout	Experimental	96 hours	LC50	180 mg/l
morpholine	110-91-8	Water flea	Experimental	48 hours	EC50	45 mg/l
morpholine	110-91-8	Green algae	Experimental	96 hours	NOEC	10 mg/l
morpholine	110-91-8	Water flea	Experimental	21 days	NOEC	5 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Aluminium Oxide (non-fibrous)	1344-28-1	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Glycerol	56-81-5	Experimental Biodegradation	14 days	BOD	63 %BOD/ThOD	OECD 301C - MITI test (I)
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	Estimated Biodegradation	28 days	BOD	31.3 %BOD/ThOD	
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Experimental Biodegradation	28 days	BOD	69 %BOD/ThOD	OECD 301F - Manometric respirometry
White mineral oil (petroleum)	8042-47-5	Experimental Biodegradation	28 days	CO2 evolution	0 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
1,2-benzisothiazol-3(2H)-one	2634-33-5	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
1,2-benzisothiazol-3(2H)-one	2634-33-5	Experimental Aquatic Inherent Biodegrad.	34 days	Dissolv. Organic Carbon Deplet	17 %removal of DOC	OECD 302A - Modified SCAS Test
1,2-benzisothiazol-3(2H)-one	2634-33-5	Experimental Biodegradation	21 days	Dissolv. Organic Carbon Deplet	80 %removal of DOC	OECD 303A - Simulated Aerobic
1,2-benzisothiazol-3(2H)-one	2634-33-5	Experimental Biodegradation		Half-life (t 1/2)	4 hours (t 1/2)	
1,2-benzisothiazol-3(2H)-one	2634-33-5	Experimental Hydrolysis		Hydrolytic half-life	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	701-048-1	Experimental Biodegradation	28 days	BOD	23 %BOD/ThOD	OECD 301F - Manometric respirometry
morpholine	110-91-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	93 %removal of DOC	OECD 301E - Modif. OECD Screen
morpholine	110-91-8	Experimental Biodegradation	31 days	Dissolv. Organic Carbon Deplet	98 %removal of DOC	OECD 302B Zahn-Wellens/EVPA

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Aluminium Oxide (non-fibrous)	1344-28-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Glycerol	56-81-5	Experimental Bioconcentration		Log Kow	-1.76	
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	926-141-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

White mineral oil (petroleum)	8042-47-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,2-benzisothiazol-3(2H)-one	2634-33-5	Experimental BCF - Fish	56 days	Bioaccumulation factor	6.62	similar to OECD 305
1,2-benzisothiazol-3(2H)-one	2634-33-5	Experimental Bioconcentration		Log Kow	1.45	OECD 107 log Kow shke flsk mtd
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	701-048-1	Experimental Bioconcentration		Log Kow	< 1	OECD 117 log Kow HPLC method
morpholine	110-91-8	Experimental BCF - Fish	42 days	Bioaccumulation factor	<2.8	OECD305-Bioconcentration
morpholine	110-91-8	Experimental Bioconcentration		Log Kow	-2.55	OECD 107 log Kow shke flsk mtd

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Glycerol	56-81-5	Estimated Mobility in Soil	Koc	<1 l/kg	Episuite™
1,2-benzisothiazol-3(2H)-one	2634-33-5	Experimental Mobility in Soil	Koc	9.33 l/kg	OECD 121 Estim. of Koc by HPLC
Condensation products of triethanolamine with addition products of fatty acids, C18 (unsaturated) alkyl with maleic anhydride	701-048-1	Experimental Mobility in Soil	Koc	<316 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. 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 01 11* Waste paint and varnish containing organic solvents or other dangerous substances

SECTION 14: Transportation information

Not hazardous for transportation.

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number	No data available.	No data available.	No data available.
14.2 UN proper shipping name	No data available.	No data available.	No data available.
14.3 Transport hazard class(es)	No data available.	No data available.	No data available.
14.4 Packing group	No data available.	No data available.	No data available.
14.5 Environmental hazards	No data available.	No data available.	No data available.
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	No data available.	No data available.	No data available.
IMDG Segregation Code	No data available.	No data available.	No data available.

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
morpholine	110-91-8	Gr. 3: Not classifiable	International Agency for Research on Cancer

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. 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
1,2-benzisothiazol-3(2H)-one	2634-33-5	100	200
morpholine	110-91-8	10	50

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

EUH066	Repeated exposure may cause skin dryness or cracking.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H361f	Suspected of damaging fertility.
H410	Very toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Revision information:
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: Carcinogenicity information 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.
Section 1: Product name information was modified.
Section 1: Product use information information was modified.
Section 02: CLP Classification Statements information was deleted.
Contains statement for sensitizers information was added.
Contains statement for sensitizers information was deleted.
Section 02: GB Classification Statements information was added.
List of sensitizers information was added.
List of sensitizers information was deleted.
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 4: First aid for eye contact information information was modified.
Section 4: First aid for inhalation information information was modified.
Section 04: Information on toxicological effects information was deleted.
Section 6: Accidental release environmental information information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: Appropriate Engineering controls information information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 8: Personal Protection - Respiratory Information information was added.
Section 8: Respiratory protection - recommended respirators guide information was added.
Section 8: Respiratory protection - recommended respirators information information was added.
Section 8: Respiratory protection information information was deleted.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was modified.
Section 11: Carcinogenicity Table 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: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: No endocrine disruptor information available warning information was deleted.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Reproductive/developmental effects information information was added.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
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 Marine transport in bulk according to IMO instruments – Main Heading information was deleted.
Section 14 UN Number information was deleted.
Section 15: Carcinogenicity information information was deleted.
Section 15: Chemical Safety Assessment information was deleted.
Section 15: Seveso Substance Text information was added.
Section 15: Seveso Substance Text information was deleted.
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.

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