Safety Data Sheet

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Document group:	32-6787-9	**Version number:**	11.00
Revision date:	15/12/2025	**Supersedes date:**	27/01/2023

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

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

1.1. Product identifier
3M™ Scotch-Weld™ Threadlocker TL43, Blue

Product Identification Numbers
UU-0015-0366-1

7100034008

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

Identified uses
Product

1.3. Details of the supplier of the safety data sheet
Address: 3M Ireland Limited, 70 SIR JOHN ROGERSON'S QUAY, D02R296 DUBLIN 2
Telephone: +353 1 280 3555
E Mail: ner-productstewardship@mmm.com
Website: www.3M.com

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

SECTION 2: Hazard identification

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

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.
Aspiration hazard classification does not apply due to the kinematic viscosity of the product.

CLASSIFICATION:
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

Skin Sensitization, Category 1 - Skin Sens. 1; H317
Carcinogenicity, Category 1B - Carc. 1B; H350
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373
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
CLP REGULATION (EC) No 1272/2008

SIGNAL WORD
DANGER.

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

Pictograms



Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
Hydroxypropyl Methacrylate	27813-02-1	248-666-3	1 - 10
2'-Phenylacetohydrazide	114-83-0	204-055-3	<= 0.7
N,N-dimethyl-p-toluidine	99-97-8	202-805-4	<= 0.5

HAZARD STATEMENTS:

H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system | respiratory system.
H410	Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P201	Obtain special instructions before use.
P260A	Do not breathe vapours.
P273	Avoid release to the environment.
P280K	Wear protective gloves and respiratory protection.

Response:

P308 + P313	IF exposed or concerned: Get medical advice/attention.

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H317	May cause an allergic skin reaction.

H350 May cause cancer.

<=125 ml Precautionary statements

Prevention:
P201 Obtain special instructions before use.
P260A Do not breathe vapours.
P280K Wear protective gloves and respiratory protection.

Response:
P308 + P313 IF exposed or concerned: Get medical advice/attention.

SUPPLEMENTAL INFORMATION:

Supplemental Precautionary Statements:
Restricted to professional users.

Contains 11% 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]
2,2'-ethylenedioxydiethyl dimethacrylate	(CAS-No.) 109-16-0 (EC-No.) 203-652-6 (REACH-No.) 01-2119969287-21	30 - 60	Skin Sens. 1B, H317
Bis(isopropyl)naphthalene	(CAS-No.) 38640-62-9 (EC-No.) 254-052-6	20 - 40	Asp. Tox. 1, H304 Eye Irrit. 2, H319 Aquatic Chronic 1, H410,M=1
Polyester resin	Trade Secret	1 - 10	Substance not classified as hazardous
Hydroxypropyl Methacrylate	(CAS-No.) 27813-02-1 (EC-No.) 248-666-3	1 - 10	Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	(CAS-No.) 68909-20-6 (EC-No.) 272-697-1	1 - 10	EUH066 STOT RE 2, H373
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	(CAS-No.) 81-07-2 (EC-No.) 201-321-0	<= 5	Substance not classified as hazardous
Siloxanes and Silicones, di-Me, reaction products with silica	(CAS-No.) 67762-90-7	1 - 5	Substance not classified as hazardous
α, α-dimethylbenzyl hydroperoxide	(CAS-No.) 80-15-9 (EC-No.) 201-254-7	< 2	Org. Perox. EF, H242 Acute Tox. 2, H330

			Acute Tox. 3, H311 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 1, H372 Aquatic Chronic 2, H411
Naphthalene, (1-methylethyl)-	(CAS-No.) 29253-36-9 (EC-No.) 249-535-3	< 1	Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
2,2'-(P-Tolylimino)diethanol	(CAS-No.) 3077-12-1 (EC-No.) 221-359-1	< 1	Acute Tox. 4, H302 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412
acrylic acid	(CAS-No.) 79-10-7 (EC-No.) 201-177-9	< 1	Flam. Liq. 3, H226 Acute Tox. 4, H332 Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Corr. 1A, H314 STOT SE 3, H335 Aquatic Acute 1, H400,M=1 Nota D Aquatic Chronic 2, H411
2'-Phenylacetohydrazide	(CAS-No.) 114-83-0 (EC-No.) 204-055-3	<= 0.7	Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Sens. 1, H317 STOT RE 1, H372 Aquatic Acute 1, H400,M=10 Aquatic Chronic 1, H410,M=10
Naphthalene, tris(1-methylethyl)-	(CAS-No.) 35860-37-8	< 0.5	Substance not classified as hazardous
N,N-dimethyl-p-toluidine	(CAS-No.) 99-97-8 (EC-No.) 202-805-4	<= 0.5	Acute Tox. 3, H301 Acute Tox. 4, H332 Carc. 1B, H350 STOT RE 2, H373 Aquatic Chronic 3, H412 Skin Sens. 1B, H317
2,6-di-tert-Butyl-p-cresol	(CAS-No.) 128-37-0 (EC-No.) 204-881-4	<= 0.5	Aquatic Chronic 1, H410,M=1 Aquatic Acute 1, H400,M=1
Titanium dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5	<= 0.1	Substance with a national occupational exposure limit

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
acrylic acid	(CAS-No.) 79-10-7 (EC-No.) 201-177-9	(C >= 1%) STOT SE 3, H335
α, α-dimethylbenzyl hydroperoxide	(CAS-No.) 80-15-9	(C >= 10%) Skin Corr. 1B, H314

	(EC-No.) 201-254-7	(3% =< C < 10%) Skin Irrit. 2, H315 (C >= 3%) Eye Dam. 1, H318 (1% =< C < 3%) Eye Irrit. 2, H319 (C >= 10%) STOT SE 3, H335

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. Remove contact lenses if easy to do. Continue rinsing. 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 skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision). Target organ effects. See Section 11 for additional details.

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

6.2. Environmental precautions
Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

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. 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. 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
Protect from sunlight. Store away from heat. 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
2,6-di-tert-Butyl-p-cresol	128-37-0	Ireland OELs	TWA(8 hours):2 mg/m3	
Titanium dioxide	13463-67-7	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3	

acrylic acid	79-10-7	Ireland OELs	TWA(8 hours):29 mg/m3(10 ppm);TWA(8 hours):10 ppm(29 mg/m3);STEL(15 minutes):59 mg/m3(20 ppm);STEL(1 minutes):20 ppm(59 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.

Derived no effect level (DNEL)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
acrylic acid		Worker	Dermal, Short-term exposure, Local effects	1 mg/cm2
acrylic acid		Worker	Inhalation, Long-term exposure (8 hours), Local effects	30 mg/m³
acrylic acid		Worker	Inhalation, Short-term exposure, Local effects	30 mg/m³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
acrylic acid		Agricultural soil	1 mg/kg d.w.
acrylic acid		Freshwater	0.003 mg/l
acrylic acid		Freshwater sediments	0.236 mg/kg d.w.
acrylic acid		Intermittent releases to water	0.0013 mg/l
acrylic acid		Marine water	0.0003 mg/l
acrylic acid		Sewage Treatment Plant	0.9 mg/l

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

8.2. Exposure controls

In addition, refer to the annex for more information.

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Applicable Norms/Standards
Use eye protection conforming to EN 166

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

Material	**Thickness (mm)**	**Breakthrough Time**
Polymer laminate	No data available	No data available

Applicable Norms/Standards
Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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 vapors or contact respirator manufacturer for appropriate gas/vapor respirator
Half facepiece or full facepiece air-purifying respirator suitable for particulates
Half facepiece or full facepiece supplied-air respirator

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
Use a respirator conforming to EN 140 or EN 136: filter type P

8.2.3. Environmental exposure controls
Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Thixotropic liquid.
Colour	Blue
Odor	Mild Solvent
Odour threshold	*No data available.*
Melting point/freezing point	*Not applicable.*
Boiling point/boiling range	>=148.9 ºC [@ 101,324.72 Pa]
Flammability	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*

Flash point	>=100 ºC [*Test Method:*Tagliabue closed cup]
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
pH	*substance/mixture is non-soluble (in water)*
Kinematic Viscosity	2,727 mm²/sec
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	<=666.6 Pa
Density	1.1 - 1.15 g/ml [@ 20 ºC]
Relative density	1.1 - 1.15 [@ 20 ºC] [*Ref Std:*WATER=1]
Relative Vapour Density	1.01 [*Ref Std:*AIR=1]
Particle Characteristics	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

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

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.
Light.

10.5 Incompatible materials
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
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
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. Allergic Skin Reaction (non-photo induced) in sensitive people: Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

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:

Prolonged or repeated exposure may cause target organ effects:
Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	Mouse	LD50 > 2,000
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Rat	LD50 10,837 mg/kg
Bis(isopropyl)naphthalene	Dermal	Rat	LD50 > 4,500 mg/kg
Bis(isopropyl)naphthalene	Inhalation-Dust/Mist	Rat	LC50 > 5.64 mg/l
Bis(isopropyl)naphthalene	Ingestion	Rat	LD50 4,130 mg/kg
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Rat	LD50 > 2,000 mg/kg
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
Hydroxypropyl Methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Hydroxypropyl Methacrylate	Ingestion	Rat	LD50 > 2,000 mg/kg

1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Ingestion	Mouse	LD50 17,000 mg/kg
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
α, α-dimethylbenzyl hydroperoxide	Dermal	Rat	LD50 500 mg/kg
α, α-dimethylbenzyl hydroperoxide	Inhalation-Vapour (4 hours)	Rat	LC50 1.4 mg/l
α, α-dimethylbenzyl hydroperoxide	Ingestion	Rat	LD50 382 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
acrylic acid	Dermal	Rabbit	LD50 640 mg/kg
acrylic acid	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3.8 mg/l
acrylic acid	Ingestion	Rat	LD50 1,250 mg/kg
2'-Phenylacetohydrazide	Dermal		LD50 estimated to be 200 - 1,000 mg/kg
2'-Phenylacetohydrazide	Ingestion	Mouse	LD50 270 mg/kg
2,6-di-tert-Butyl-p-cresol	Dermal	Rat	LD50 > 2,000 mg/kg
2,6-di-tert-Butyl-p-cresol	Ingestion	Rat	LD50 > 2,930 mg/kg
N,N-dimethyl-p-toluidine	Ingestion	Mouse	LD50 140 mg/kg
N,N-dimethyl-p-toluidine	Dermal	Rabbit	LD50 > 2,000 mg/kg
N,N-dimethyl-p-toluidine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 1.4 mg/l
2,2'-(P-Tolylimino)diethanol	Dermal	Rabbit	LD50 > 2,000 mg/kg
2,2'-(P-Tolylimino)diethanol	Ingestion	Rat	LD50 959 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Rabbit	No significant irritation
Bis(isopropyl)naphthalene	Rabbit	Minimal irritation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Rabbit	No significant irritation
Hydroxypropyl Methacrylate	Rabbit	Minimal irritation
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	similar compounds	No significant irritation
α, α-dimethylbenzyl hydroperoxide	official classification	Corrosive
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
acrylic acid	Rabbit	Corrosive
2,6-di-tert-Butyl-p-cresol	Human and animal	Minimal irritation
N,N-dimethyl-p-toluidine	Rabbit	No significant irritation
2,2'-(P-Tolylimino)diethanol	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Rabbit	No significant irritation
Bis(isopropyl)naphthalene	Rabbit	Severe irritant

Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Rabbit	No significant irritation
Hydroxypropyl Methacrylate	Rabbit	Moderate irritant
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	similar compounds	No significant irritation
α, α-dimethylbenzyl hydroperoxide	official classification	Corrosive
Siloxanes and Silicones, di-Me, reaction products with silica	Rabbit	No significant irritation
acrylic acid	Rabbit	Corrosive
2,6-di-tert-Butyl-p-cresol	Rabbit	Mild irritant
N,N-dimethyl-p-toluidine	Rabbit	No significant irritation
2,2'-(P-Tolylimino)diethanol	Rabbit	Corrosive
Titanium dioxide	Rabbit	No significant irritation

Skin Sensitisation

Name	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Mouse	Sensitising
Bis(isopropyl)naphthalene	Guinea pig	Not classified
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Guinea pig	Not classified
Hydroxypropyl Methacrylate	Human and animal	Sensitising
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Mouse	Not classified
Siloxanes and Silicones, di-Me, reaction products with silica	Human and animal	Not classified
acrylic acid	Guinea pig	Not classified
2'-Phenylacetohydrazide	Professional judgement	Sensitising
2,6-di-tert-Butyl-p-cresol	Human	Not classified
N,N-dimethyl-p-toluidine	Guinea pig	Sensitising
2,2'-(P-Tolylimino)diethanol	Mouse	Sensitising
Titanium dioxide	Human and animal	Not classified

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
2,2'-ethylenedioxydiethyl dimethacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Bis(isopropyl)naphthalene	In Vitro	Not mutagenic
Bis(isopropyl)naphthalene	In vivo	Not mutagenic
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	In Vitro	Not mutagenic
Hydroxypropyl Methacrylate	In vivo	Not mutagenic
Hydroxypropyl Methacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	In Vitro	Not mutagenic
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	In vivo	Some positive data exist, but the data are not sufficient for classification
α, α-dimethylbenzyl hydroperoxide	In vivo	Not mutagenic
α, α-dimethylbenzyl hydroperoxide	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
acrylic acid	In vivo	Not mutagenic
acrylic acid	In Vitro	Some positive data exist, but the data are not sufficient for classification
2'-Phenylacetohydrazide	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,6-di-tert-Butyl-p-cresol	In Vitro	Not mutagenic
2,6-di-tert-Butyl-p-cresol	In vivo	Not mutagenic
N,N-dimethyl-p-toluidine	In vivo	Not mutagenic
N,N-dimethyl-p-toluidine	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,2'-(P-Tolylimino)diethanol	In Vitro	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	Mouse	Not carcinogenic
Bis(isopropyl)naphthalene	Ingestion	Rat	Not carcinogenic
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Ingestion	Mouse	Not carcinogenic
Siloxanes and Silicones, di-Me, reaction products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
acrylic acid	Ingestion	Rat	Not carcinogenic
acrylic acid	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
2,6-di-tert-Butyl-p-cresol	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
N,N-dimethyl-p-toluidine	Ingestion	Multiple animal species	Carcinogenic.
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	5 weeks
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Bis(isopropyl)naphthalene	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	during organogenesis
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Hydroxypropyl Methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Hydroxypropyl Methacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
Hydroxypropyl Methacrylate	Ingestion	Not classified for development	Rat	NOAEL	during

				1,000 mg/kg/day	gestation
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Ingestion	Not classified for female reproduction	Mouse	NOAEL 714 mg/kg/day	6 generation
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Ingestion	Not classified for male reproduction	Mouse	NOAEL 714 mg/kg/day	6 generation
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Ingestion	Not classified for development	Mouse	NOAEL 2,000 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
acrylic acid	Ingestion	Not classified for female reproduction	Rat	NOAEL 460 mg/kg/day	2 generation
acrylic acid	Ingestion	Not classified for male reproduction	Rat	NOAEL 460 mg/kg/day	2 generation
acrylic acid	Inhalation	Not classified for development	Rat	NOAEL 1.1 mg/l	during organogenesis
acrylic acid	Ingestion	Not classified for development	Rat	NOAEL 53 mg/kg/day	2 generation
2,6-di-tert-Butyl-p-cresol	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-di-tert-Butyl-p-cresol	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-di-tert-Butyl-p-cresol	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	2 generation
N,N-dimethyl-p-toluidine	Ingestion	Not classified for female reproduction	Rat	NOAEL 60 mg/kg/day	90 days

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Bis(isopropyl)naphthalene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Hydroxypropyl Methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation	similar compounds	NOAEL Not available	
α, α-dimethylbenzyl hydroperoxide	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	occupational exposure
α, α-dimethylbenzyl hydroperoxide	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure
α, α-dimethylbenzyl hydroperoxide	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
acrylic acid	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	
2,2'-(P-Tolylimino)diethanol	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
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	liver	Not classified	Mouse	NOAEL 2,000 mg/kg/day	13 weeks
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	skin	Not classified	Mouse	NOAEL 100 mg/kg/day	13 weeks

2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	gastrointestinal tract | hematopoietic system | nervous system | kidney and/or bladder | respiratory system	Not classified	Mouse	NOAEL 2,000 mg/kg/day	13 weeks
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	hematopoietic system | liver | nervous system | kidney and/or bladder | eyes	Not classified	Rat	NOAEL 3,849 mg/kg/day	13 weeks
Bis(isopropyl)naphthalene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 170 mg/kg/day	6 months
Bis(isopropyl)naphthalene	Ingestion	liver | immune system | kidney and/or bladder	Not classified	Rat	NOAEL 170 mg/kg/day	6 months
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 0.035 mg/l	13 weeks
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Inhalation	hematopoietic system | kidney and/or bladder	Not classified	Rat	NOAEL 0.035 mg/l	13 weeks
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	Ingestion	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	5 weeks
Hydroxypropyl Methacrylate	Inhalation	blood	Not classified	Rat	NOAEL 0.5 mg/l	21 days
Hydroxypropyl Methacrylate	Ingestion	hematopoietic system | heart | endocrine system | liver | immune system | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	41 days
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 1,500 mg/kg/day	1 years
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 7,500 mg/kg/day	1 months
α, α-dimethylbenzyl hydroperoxide	Inhalation	nervous system | respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.2 mg/l	7 days
α, α-dimethylbenzyl hydroperoxide	Inhalation	heart | liver | kidney and/or bladder	Not classified	Rat	NOAEL 0.03 mg/l	90 days
Siloxanes and Silicones, di-Me, reaction products with silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
2'-Phenylacetohydrazide	Ingestion	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	Dog	LOAEL 4 mg/kg/day	7 days
2,6-di-tert-Butyl-p-cresol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	28 days
2,6-di-tert-Butyl-p-cresol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-di-tert-Butyl-p-cresol	Ingestion	blood	Not classified	Rat	LOAEL 420 mg/kg/day	40 days
2,6-di-tert-Butyl-p-cresol	Ingestion	endocrine system	Not classified	Rat	NOAEL 25 mg/kg/day	2 generation
2,6-di-tert-Butyl-p-cresol	Ingestion	heart	Not classified	Mouse	NOAEL 3,480 mg/kg/day	10 weeks

N,N-dimethyl-p-toluidine	Ingestion	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 20 mg/kg/day	3 months
N,N-dimethyl-p-toluidine	Ingestion	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 20 mg/kg/day	2 years
N,N-dimethyl-p-toluidine	Ingestion	liver | immune system | kidney and/or bladder | heart | skin | endocrine system | gastrointestinal tract | bone, teeth, nails, and/or hair | muscles | nervous system | eyes | vascular system	Not classified	Rat	NOAEL 60 mg/kg/day	2 years
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value
Bis(isopropyl)naphthalene	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 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
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Green algae	Experimental	72 hours	ErC50	>100 mg/l
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Zebra Fish	Experimental	96 hours	LC50	16.4 mg/l
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Green algae	Experimental	72 hours	NOEC	18.6 mg/l
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Water flea	Experimental	21 days	NOEC	32 mg/l
Bis(isopropyl)naphthalene	38640-62-9	Bacteria	Experimental	N/A	EC10	>0.16 mg/l
Bis(isopropyl)naphthalene	38640-62-9	Medaka	Experimental	96 hours	LC50	2.44 mg/l

Bis(isopropyl)naphthalene	38640-62-9	Water flea	Experimental	48 hours	EL50	1.7 mg/l
Bis(isopropyl)naphthalene	38640-62-9	Green algae	Experimental	72 hours	NOEC	0.15 mg/l
Bis(isopropyl)naphthalene	38640-62-9	Water flea	Experimental	21 days	NOEC	0.013 mg/l
Hydroxypropyl Methacrylate	27813-02-1	Bacteria	Experimental	N/A	EC10	1,140 mg/l
Hydroxypropyl Methacrylate	27813-02-1	Golden Orfe	Experimental	48 hours	EC50	493 mg/l
Hydroxypropyl Methacrylate	27813-02-1	Green algae	Experimental	72 hours	ErC50	>97.2 mg/l
Hydroxypropyl Methacrylate	27813-02-1	Water flea	Experimental	48 hours	EC50	>143 mg/l
Hydroxypropyl Methacrylate	27813-02-1	Green algae	Experimental	72 hours	NOEC	97.2 mg/l
Hydroxypropyl Methacrylate	27813-02-1	Water flea	Experimental	21 days	NOEC	45.2 mg/l
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Green algae	Experimental	72 hours	ErC50	>10,000 mg/l
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Water flea	Experimental	24 hours	EC50	>1,000 mg/l
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Zebra Fish	Experimental	96 hours	LC50	>10,000 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Green algae	Analogous Compound	72 hours	ErC50	>100 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Zebra Fish	Analogous Compound	96 hours	LC50	>400 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Water flea	Experimental	48 hours	EC50	>1,000 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Green algae	Analogous Compound	72 hours	NOEC	100 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Activated sludge	Experimental	30 minutes	LOEC	>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
α, α-dimethylbenzyl hydroperoxide	80-15-9	Bacteria	Experimental	18 hours	EC10	0.103 mg/l
α, α-dimethylbenzyl hydroperoxide	80-15-9	Green algae	Experimental	72 hours	EC50	3.1 mg/l
α, α-dimethylbenzyl hydroperoxide	80-15-9	Rainbow trout	Experimental	96 hours	LC50	3.9 mg/l
α, α-dimethylbenzyl hydroperoxide	80-15-9	Water flea	Experimental	48 hours	EC50	18.84 mg/l
α, α-dimethylbenzyl hydroperoxide	80-15-9	Green algae	Experimental	72 hours	NOEC	1 mg/l
2,2'-(P-Tolylimino)diethanol	3077-12-1	Activated sludge	Analogous Compound	3 hours	EC50	>1,000 mg/l
2,2'-(P-Tolylimino)diethanol	3077-12-1	Common Carp	Analogous Compound	96 hours	LC50	>100 mg/l
2,2'-(P-Tolylimino)diethanol	3077-12-1	Green algae	Analogous Compound	72 hours	ErC50	>100 mg/l
2,2'-(P-Tolylimino)diethanol	3077-12-1	Water flea	Analogous Compound	48 hours	EC50	48 mg/l
2,2'-(P-Tolylimino)diethanol	3077-12-1	Green algae	Analogous Compound	72 hours	NOEC	100 mg/l

acrylic acid	79-10-7	Diatom	Experimental	5 days	ErC50	50 mg/l
acrylic acid	79-10-7	Green algae	Experimental	72 hours	ErC50	0.13 mg/l
acrylic acid	79-10-7	Mysid Shrimp	Experimental	96 hours	LC50	97 mg/l
acrylic acid	79-10-7	Rainbow trout	Experimental	96 hours	LC50	27 mg/l
acrylic acid	79-10-7	Sheepshead Minnow	Experimental	96 hours	LC50	236 mg/l
acrylic acid	79-10-7	Water flea	Experimental	48 hours	EC50	47 mg/l
acrylic acid	79-10-7	Diatom	Experimental	72 hours	NOEC	36 mg/l
acrylic acid	79-10-7	Green algae	Experimental	72 hours	ErC10	0.03 mg/l
acrylic acid	79-10-7	Medaka	Experimental	45 days	NOEC	10.1 mg/l
acrylic acid	79-10-7	Water flea	Experimental	21 days	NOEC	3.8 mg/l
acrylic acid	79-10-7	Activated sludge	Experimental	30 minutes	NOEC	100 mg/l
acrylic acid	79-10-7	Bird	Experimental	7 days	LD50	>=98 mg per kg of bodyweight
acrylic acid	79-10-7	Ciliated Protozoa	Experimental	48 hours	NOEC	0.9 mg/l
acrylic acid	79-10-7	Redworm	Experimental	14 days	LC50	>1,000 mg/kg (Dry Weight)
acrylic acid	79-10-7	Soil microbes	Experimental	28 days	NOEC	100 mg/kg (Dry Weight)
Naphthalene, (1-methylethyl)-	29253-36-9	Green algae	Experimental	72 hours	EC50	0.245 mg/l
Naphthalene, (1-methylethyl)-	29253-36-9	Medaka	Experimental	96 hours	LC50	0.74 mg/l
Naphthalene, (1-methylethyl)-	29253-36-9	Water flea	Experimental	48 hours	EC50	0.67 mg/l
Naphthalene, (1-methylethyl)-	29253-36-9	Water flea	Estimated	21 days	NOEC	0.013 mg/l
Naphthalene, (1-methylethyl)-	29253-36-9	Green algae	Experimental	72 hours	NOEC	0.079 mg/l
2'-Phenylacetohydrazide	114-83-0	Medaka	Analogous Compound	96 hours	LC50	0.016 mg/l
2'-Phenylacetohydrazide	114-83-0	Water flea	Analogous Compound	48 hours	EC50	0.016 mg/l
2'-Phenylacetohydrazide	114-83-0	Zebra Fish	Analogous Compound	16 days	NOEC	0.00049 mg/l
2'-Phenylacetohydrazide	114-83-0	Anaerobic sludge	Analogous Compound	24 hours	N/A	>=100 mg/l
2,6-di-tert-Butyl-p-cresol	128-37-0	Activated sludge	Experimental	3 hours	EC50	>10,000 mg/l
2,6-di-tert-Butyl-p-cresol	128-37-0	Green algae	Experimental	72 hours	EC50	>0.4 mg/l
2,6-di-tert-Butyl-p-cresol	128-37-0	Water flea	Experimental	48 hours	EC50	0.48 mg/l
2,6-di-tert-Butyl-p-cresol	128-37-0	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
2,6-di-tert-Butyl-p-cresol	128-37-0	Green algae	Experimental	72 hours	EC10	0.4 mg/l
2,6-di-tert-Butyl-p-cresol	128-37-0	Medaka	Experimental	42 days	NOEC	0.053 mg/l
2,6-di-tert-Butyl-p-cresol	128-37-0	Water flea	Experimental	21 days	NOEC	0.023 mg/l
N,N-dimethyl-p-toluidine	99-97-8	Green algae	Estimated	72 hours	EC50	22 mg/l
N,N-dimethyl-p-toluidine	99-97-8	Water flea	Estimated	48 hours	EC50	13.7 mg/l

N,N-dimethyl-p-toluidine	99-97-8	Fathead minnow	Experimental	96 hours	LC50	46 mg/l
Naphthalene, tris(1-methylethyl)-	35860-37-8	Medaka	Analogous Compound	96 hours	LC50	2.44 mg/l
Naphthalene, tris(1-methylethyl)-	35860-37-8	Water flea	Analogous Compound	48 hours	EL50	1.7 mg/l
Naphthalene, tris(1-methylethyl)-	35860-37-8	Green algae	Analogous Compound	72 hours	NOEC	0.15 mg/l
Naphthalene, tris(1-methylethyl)-	35860-37-8	Water flea	Analogous Compound	21 days	NOEC	0.013 mg/l
Naphthalene, tris(1-methylethyl)-	35860-37-8	Bacteria	Analogous Compound	N/A	EC10	>0.16 mg/l
Titanium dioxide	13463-67-7	Activated sludge	Experimental	3 hours	NOEC	>=1,000 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	EC50	>10,000 mg/l
Titanium dioxide	13463-67-7	Fathead minnow	Experimental	96 hours	LC50	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Diatom	Experimental	72 hours	NOEC	5,600 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Experimental Biodegradation	28 days	CO2 evolution	85 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Bis(isopropyl)naphthalene	38640-62-9	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Hydroxypropyl Methacrylate	27813-02-1	Experimental Biodegradation	28 days	BOD	81 %BOD/ThOD	OECD 301C - MITI test (I)
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Data not availbl-insufficient	N/A	N/A	N/A	N/A
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Experimental Biodegradation	7 days	Percent degraded	90 %degraded	
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Analogous Compound Biodegradation	28 days	BOD	96.55 %BOD/ThOD	OECD 301D - Closed bottle test
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Analogous Compound Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	OECD 111 Hydrolysis func of pH
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
α, α-dimethylbenzyl hydroperoxide	80-15-9	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
2,2'-(P-Tolylimino)diethanol	3077-12-1	Analogous Compound Biodegradation	29 days	CO2 evolution	1.5 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
acrylic acid	79-10-7	Experimental Biodegradation	28 days	Percent degraded	81 %BOD/ThOD	OECD 301D - Closed bottle test
acrylic acid	79-10-7	Experimental Aquatic Inherent Biodegrad.	28 days	Dissolv. Organic Carbon Deplet	100 %removal of DOC	OECD 302B Zahn-Wellens/EVPA
acrylic acid	79-10-7	Experimental Photolysis		Photolytic half-life (in air)	1.4 days (t 1/2)	
acrylic acid	79-10-7	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	>1 years (t 1/2)	40CFR 796.3500-Hydrolysis
acrylic acid	79-10-7	Experimental Soil Metabolism Aerobic	3 days	Percent degraded	72.9 %CO2 evolution/THCO2 evolution	
Naphthalene, (1-	29253-36-9	Experimental	28 days	CO2 evolution	63 %CO2	OECD 310 CO2 Headspace

methylethyl)-		Biodegradation			evolution/THCO2 evolution	
2'-Phenylacetohydrazide	114-83-0	Analogous Compound Biodegradation	28 days	Dissolv. Organic Carbon Deplet	97 %removal of DOC	OECD 301E - Modif. OECD Screen
2'-Phenylacetohydrazide	114-83-0	Analogous Compound Aquatic Inherent Biodegrad.	10 days	Dissolv. Organic Carbon Deplet	64 %removal of DOC	OECD 302B Zahn-Wellens/EVPA
2,6-di-tert-Butyl-p-cresol	128-37-0	Data not availbl-insufficient	N/A	N/A	N/A	N/A
N,N-dimethyl-p-toluidine	99-97-8	Estimated Biodegradation	14 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
Naphthalene, tris(1-methylethyl)-	35860-37-8	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
Titanium dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	Experimental Bioconcentration		Log Kow	2.3	EC A.8 Partition Coefficient
Bis(isopropyl)naphthalene	38640-62-9	Experimental BCF - Fish	36 days	Bioaccumulation factor	1800-6400	OECD305-Bioconcentration
Bis(isopropyl)naphthalene	38640-62-9	Modeled Bioconcentration		Log Kow	6.081	Episuite™
Hydroxypropyl Methacrylate	27813-02-1	Experimental Bioconcentration		Log Kow	0.97	EC A.8 Partition Coefficient
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	68909-20-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Experimental Bioconcentration		Log Kow	-0.024	OECD 117 log Kow HPLC method
Siloxanes and Silicones, di-Me, reaction products with silica	67762-90-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
α, α-dimethylbenzyl hydroperoxide	80-15-9	Experimental Bioconcentration		Log Kow	1.82	
2,2'-(P-Tolylimino)diethanol	3077-12-1	Experimental Bioconcentration		Log Kow	2.0	
acrylic acid	79-10-7	Experimental Bioconcentration		Log Kow	0.46	OECD 107 log Kow shke flsk mtd
Naphthalene, (1-methylethyl)-	29253-36-9	Experimental BCF - Fish	56 days	Bioaccumulation factor	870	OECD305-Bioconcentration
2'-Phenylacetohydrazide	114-83-0	Modeled Bioconcentration		Bioaccumulation factor	5	Catalogic™
2'-Phenylacetohydrazide	114-83-0	Modeled Bioconcentration		Log Kow	0.74	Episuite™
2,6-di-tert-Butyl-p-cresol	128-37-0	Experimental BCF - Fish	56 days	Bioaccumulation factor	1277	OECD305-Bioconcentration
N,N-dimethyl-p-toluidine	99-97-8	Experimental Bioconcentration		Log Kow	1.73	
Naphthalene, tris(1-methylethyl)-	35860-37-8	Experimental BCF - Fish	70 days	Bioaccumulation factor	14500	OECD305-Bioconcentration
Naphthalene, tris(1-methylethyl)-	35860-37-8	Modeled Bioconcentration		Log Kow	7.54	Episuite™
Titanium dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	9.6	

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Bis(isopropyl)naphthalene	38640-62-9	Modeled Mobility in Soil	Koc	36,000 l/kg	Episuite™

Hydroxypropyl Methacrylate	27813-02-1	Experimental Mobility in Soil	Koc	10 l/kg	Episuite™
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Analogous Compound Mobility in Soil	Koc	2,028 l/kg	OECD 121 Estim. of Koc by HPLC
2,2'-(P-Tolylimino)diethanol	3077-12-1	Experimental Mobility in Soil	Koc	214 l/kg	EC C.19 Estim. of Koc by HPLC
acrylic acid	79-10-7	Experimental Mobility in Soil	Koc	6-137 l/kg	40CFR796.2750 Sed/Soil Adsorp
Naphthalene, (1-methylethyl)-	29253-36-9	Estimated Mobility in Soil	Koc	7,500 l/kg	Episuite™
2'-Phenylacetohydrazide	114-83-0	Modeled Mobility in Soil	Koc	24 l/kg	ACD/Labs ChemSketch™
Naphthalene, tris(1-methylethyl)-	35860-37-8	Modeled Mobility in Soil	Koc	176,000 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. 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
20 01 27* Paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	UN3082	UN3082	UN3082

14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(BIS(ISOPROPYL)NAPHTHALENE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(BIS(ISOPROPYL)NAPHTHALENE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(BIS(ISOPROPYL)NAPHTHALENE)
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	M6	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
2,6-di-tert-Butyl-p-cresol	128-37-0	Gr. 3: Not classifiable	International Agency for Research on Cancer
acrylic acid	79-10-7	Gr. 3: Not classifiable	International Agency for Research on Cancer
N,N-dimethyl-p-toluidine	99-97-8	Carc. 1B	Regulation (EC) No. 1272/2008, Table 3.1
N,N-dimethyl-p-toluidine	99-97-8	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Gr. 3: Not classifiable	International Agency for Research on Cancer
Titanium dioxide	13463-67-7	Grp. 2B: Possible human	International Agency

carc. 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 Japan Chemical Substance Control Law. 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.

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
E1 Hazardous to the Aquatic environment	100	200

Seveso named dangerous substances, Annex 1, Part 2
None

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

EUH066	Repeated exposure may cause skin dryness or cracking.
H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.

H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system | respiratory system.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
Section 1: Address information was modified.
Section 1: E-mail address information was modified.
Section 1: Product use information information was modified.
Section 2: <125ml Precautionary - Prevention information was modified.
Section 2: <125ml Precautionary - Response information was modified.
CLP: Ingredient table information was modified.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was modified.
Section 3: Composition/ Information of ingredients table information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 08: Personal Protection - Apron Statement information was added.
Section 8: Personal Protection - Skin/body information information was deleted.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 8: Skin protection - protective clothing information information was deleted.
Section 9: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 09: Odor information was modified.
Section 09: Particle Characteristics N/A information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: 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: Component ecotoxicity information information was modified.
Section 12: Mobility in soil information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12:Bioccumulative potential information information was modified.
Section 15: Carcinogenicity information information was modified.
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 modified.

Annex

1. Title

Substance identification	acrylic acid; EC No. 201-177-9; CAS Nbr 79-10-7;
Exposure Scenario Name	Industrial Use of Adhesives
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 13 -Treatment of articles by dipping and pouring ERC 06c -Use of monomer in polymerisation processes at industrial site (inclusion or not into/onto article)
Processes, tasks and activities covered	Application of product.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Duration of use: > 4 hours task; Indoor use with Local Exhaust Ventilation; Outdoor use;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.; Safety glasses with side shields.; **Environmental:** None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

1. Title	
Substance identification	acrylic acid; EC No. 201-177-9; CAS Nbr 79-10-7;
Exposure Scenario Name	Professional Use of Adhesives
Lifecycle Stage	Widespread use by professional workers
Contributing activities	PROC 13 -Treatment of articles by dipping and pouring ERC 08c -Widespread use leading to inclusion into/onto article (indoor)
Processes, tasks and activities covered	Application of product.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Duration of exposure per day at workplace [for one worker]: > 4 hours task; Indoor use with Local Exhaust Ventilation; Outdoor use; **Task: Application of product without local exhaust ventilation**; Indoor use; Duration of use: <= 1 hours per task;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific glove material.;

	Safety glasses with side shields.; **Environmental:** None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.

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.

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