Safety Data Sheet

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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 TL71, Red

Product Identification Numbers
UU-0015-5274-2

7100040843

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

Identified uses
Adhesive

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

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

SECTION 2: Hazard identification

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

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

CLASSIFICATION:
Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315
Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

Skin Sensitization, Category 1 - Skin Sens. 1; H317
Specific Target Organ Toxicity-Repeated Exposure, Category 2 - STOT RE 2; H373
Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335
Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

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

SIGNAL WORD
WARNING.

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

Pictograms

Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	203-652-6	40 - 70
HYDROXYPROPYL METHACRYLATE	27813-02-1	248-666-3	1 - 10
acrylic acid	79-10-7	201-177-9	<= 1.5
α, α-dimethylbenzyl hydroperoxide	80-15-9	201-254-7	< 1.5
2,2'-(p-Tolylimino)diethanol	3077-12-1	221-359-1	< 1
2'-Phenylacetohydrazide	114-83-0	204-055-3	<= 0.5

HAZARD STATEMENTS:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260A	Do not breathe vapours.
P273	Avoid release to the environment.
P280E	Wear protective gloves.

Response:

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

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.

<=125 ml Precautionary statements

Prevention:

P260A Do not breathe vapours.
P280E Wear protective gloves.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

9% of the mixture consists of components of unknown acute inhalation toxicity.
Contains 25% 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	40 - 70	Skin Sens. 1, H317
Polyester Resin (NJTS Reg. No. 04499600-7087)	Trade Secret	10 - 30	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
α, α-dimethylbenzyl hydroperoxide	(CAS-No.) 80-15-9 (EC-No.) 201-254-7	< 1.5	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
acrylic acid	(CAS-No.) 79-10-7 (EC-No.) 201-177-9 (REACH-No.) 01-2119452449-31	<= 1.5	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
2,2'-(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
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	(CAS-No.) 81-07-2 (EC-No.) 201-321-0	<= 1	Substance not classified as hazardous
2'-Phenylacetohydrazide	(CAS-No.) 114-83-0 (EC-No.) 204-055-3	<= 0.5	Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Sens. 1, H317 STOT RE 1, H372 Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=10

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 (REACH-No.) 01-2119452449-31	(C >= 1%) STOT SE 3, H335
α, α-dimethylbenzyl hydroperoxide	(CAS-No.) 80-15-9 (EC-No.) 201-254-7	(C >= 10%) Skin Corr. 1B, H314 (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
No critical symptoms or effects. See Section 11.1, information on toxicological effects.

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. 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. 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 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.)

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
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:
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

Respiratory protection

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

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

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

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	Red
Odor	Mild Odor
Odour threshold	*No data available.*

Melting point/freezing point	*Not applicable.*
Boiling point/boiling range	>=148.9 ºC [@ 101,324.72 Pa]
Flammability (solid, gas)	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	455 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 - 1.13 g/ml [@ 20 ºC]
Relative density	1.1 - 1.13 [@ 20 ºC] [*Ref Std:*WATER=1]
Relative Vapour Density	1.01 [*Ref Std:*AIR=1]

9.2. Other information

9.2.2 Other safety characteristics

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

SECTION 10: Stability and reactivity

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

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

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

Eye contact
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.

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	Professional judgement	LD50 estimated to be > 5,000 mg/kg
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Rat	LD50 10,837 mg/kg
HYDROXYPROPYL METHACRYLATE	Dermal	Rabbit	LD50 > 5,000 mg/kg
HYDROXYPROPYL METHACRYLATE	Ingestion	Rat	LD50 > 11,200 mg/kg
acrylic acid	Dermal	Rabbit	LD50 > 2,000 mg/kg
acrylic acid	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3.8 mg/l
acrylic acid	Ingestion	Rat	LD50 1,250 mg/kg
α, α-dimethylbenzyl hydroperoxide	Dermal	Rat	LD50 500 mg/kg
α, α-dimethylbenzyl hydroperoxide	Inhalation-Vapour (4	Rat	LC50 1.4 mg/l

	hours)		
α, α-dimethylbenzyl hydroperoxide	Ingestion	Rat	LD50 382 mg/kg
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Dermal		LD50 estimated to be > 5,000 mg/kg
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	Ingestion	Mouse	LD50 17,000 mg/kg
2'-Phenylacetohydrazide	Dermal		LD50 estimated to be 200 - 1,000 mg/kg
2'-Phenylacetohydrazide	Ingestion	Mouse	LD50 270 mg/kg
2,2'-(p-Tolylimino)diethanol	Dermal	Rabbit	LD50 > 2,000 mg/kg
2,2'-(p-Tolylimino)diethanol	Ingestion	Rat	LD50 959 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Guinea pig	Mild irritant
HYDROXYPROPYL METHACRYLATE	Rabbit	Minimal irritation
acrylic acid	Rabbit	Corrosive
α, α-dimethylbenzyl hydroperoxide	Rabbit	Corrosive
2,2'-(p-Tolylimino)diethanol	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Professional judgement	Moderate irritant
HYDROXYPROPYL METHACRYLATE	Rabbit	Moderate irritant
acrylic acid	Rabbit	Corrosive
α, α-dimethylbenzyl hydroperoxide	Rabbit	Corrosive
2,2'-(p-Tolylimino)diethanol	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Human and animal	Sensitising
HYDROXYPROPYL METHACRYLATE	Human and animal	Sensitising
acrylic acid	Guinea pig	Not classified
2'-Phenylacetohydrazide	Professional judgement	Sensitising
2,2'-(p-Tolylimino)diethanol	Mouse	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
2,2'-ethylenedioxydiethyl dimethacrylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
HYDROXYPROPYL METHACRYLATE	In vivo	Not mutagenic
HYDROXYPROPYL METHACRYLATE	In Vitro	Some positive data exist, but the data are not sufficient for classification
acrylic acid	In vivo	Not mutagenic

acrylic acid	In Vitro	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
2'-Phenylacetohydrazide	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,2'-(p-Tolylimino)diethanol	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Dermal	Mouse	Not carcinogenic
acrylic acid	Ingestion	Rat	Not carcinogenic
acrylic acid	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for female reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for male reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
2,2'-ethylenedioxydiethyl dimethacrylate	Ingestion	Not classified for development	Mouse	NOAEL 1 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 1,000 mg/kg/day	during gestation
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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
HYDROXYPROPYL METHACRYLATE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
acrylic acid	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	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	

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	kidney and/or bladder | blood	Not classified	Mouse	NOAEL 833 mg/kg/day	78 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
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
2'-Phenylacetohydrazide	Ingestion	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	Dog	LOAEL 4 mg/kg/day	7 days

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

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

11.2. Information on other hazards

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

SECTION 12: Ecological information

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

12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
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
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
acrylic acid	79-10-7	Green algae	Experimental	72 hours	EC50	0.13 mg/l
acrylic acid	79-10-7	Rainbow trout	Experimental	96 hours	LC50	27 mg/l
acrylic acid	79-10-7	Water flea	Experimental	48 hours	EC50	95 mg/l
acrylic acid	79-10-7	Green algae	Experimental	72 hours	EC10	0.03 mg/l
acrylic acid	79-10-7	Water flea	Experimental	21 days	NOEC	3.8 mg/l
acrylic acid	79-10-7	N/A	Experimental	7 days	LD50	>=98 mg per kg of bodyweight
acrylic acid	79-10-7	N/A	Experimental	48 hours	NOEC	0.9 mg/l
acrylic acid	79-10-7	Activated sludge	Experimental	30 minutes	NOEC	100 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)
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
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Guppy	Analogous Compound	96 hours	LC50	>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
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Green algae	Experimental	72 hours	ErC50	>200 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Water flea	Experimental	48 hours	EC50	>1,000 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

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
HYDROXYPROPYL METHACRYLATE	27813-02-1	Experimental Biodegradation	28 days	BOD	81 %BOD/ThOD	OECD 301C - MITI test (I)
acrylic acid	79-10-7	Experimental Biodegradation	28 days	Percent degraded	81 %BOD/ThOD	OECD 301D - Closed bottle test
acrylic acid	79-10-7	Estimated Photolysis		Photolytic half-life (in air)	3.2 days (t 1/2)	
acrylic acid	79-10-7	Experimental Biodegradation	3 days	Percent degraded	72.9 %CO2 evolution/THCO2 evolution	
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
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Analogous Compound Biodegradation	28 days	BOD	32.09 %BOD/ThOD	OECD 301F - Manometric respirometry
2'-Phenylacetohydrazide	114-83-0	Analogous Compound Biodegradation	28 days	Dissolv. Organic Carbon Deplet	97 %removal of DOC	OECD 301E - Modif. OECD Screen

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
HYDROXYPROPYL METHACRYLATE	27813-02-1	Experimental Bioconcentration		Log Kow	0.97	EC A.8 Partition Coefficient
acrylic acid	79-10-7	Experimental Bioconcentration		Log Kow	0.46	OECD 107 log Kow shke flsk mtd
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	
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Experimental Bioconcentration		Log Kow	-0.024	OECD 117 log Kow HPLC method
2'-Phenylacetohydrazide	114-83-0	Modeled BCF - Fish		Bioaccumulation factor	5	Catalogic™

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
HYDROXYPROPYL METHACRYLATE	27813-02-1	Experimental Mobility in Soil	Koc	10 l/kg	Episuite™
acrylic acid	79-10-7	Experimental Mobility in Soil	Koc	6-137 l/kg	40CFR796.2750 Sed/Soil Adsorp
2,2'-(p-Tolylimino)diethanol	3077-12-1	Experimental Mobility in Soil	Koc	214 l/kg	EC C.19 Estim. of Koc by HPLC
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Modeled Mobility in Soil	Koc	23 l/kg	Episuite™
2'-Phenylacetohydrazide	114-83-0	Modeled Mobility in Soil	Koc	64 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.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(1-ACETYL-2-PHENYLHYDRAZINE)
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
acrylic acid	79-10-7	Gr. 3: Not classifiable	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

Global inventory status

Contact 3M for more 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.

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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
acrylic acid	79-10-7	50	200
α, α-dimethylbenzyl hydroperoxide	80-15-9	50	200

Regulation (EU) No 649/2012
No chemicals listed

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

SECTION 16: Other information

List of relevant H statements

H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
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 2: <125ml Precautionary - Prevention information was modified.
Section 2: <125ml Precautionary - Response information was added.
Label: CLP Precautionary - Prevention information was modified.
Label: CLP Precautionary - Response information was added.
Section 8: Occupational exposure limit table information was modified.
Section 9: Property description for optional properties information was modified.
Section 9: Vapour density value 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.

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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