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 General Purpose Pipe Sealant PS77, Yellow

Product Identification Numbers

UU-0015-0443-8	UU-0015-0447-9
7100034142	7100034204

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 United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone:	+44 (0)1344 858 000
E Mail:	tox.uk@mmm.com
Website:	www.3M.com/uk

1.4. Emergency telephone number
+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
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.
The aspiration hazard classification is not required due to the product's viscosity.

CLASSIFICATION:
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
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
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	20 - 40
HYDROXYPROPYL METHACRYLATE	27813-02-1	248-666-3	1 - 10
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	<= 0.7

HAZARD STATEMENTS:

H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
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:

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

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.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international

regulations.

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:
P280E Wear protective gloves.

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

Contains 38% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Polyester resin	Trade Secret			20 - 40	Substance not classified as hazardous
2,2'-ethylenedioxydiethyl dimethacrylate	109-16-0	203-652-6	01-2119969287-21	20 - 40	Skin Sens. 1, H317
Bis(isopropyl)naphthalene	38640-62-9	254-052-6		10 - 30	Aquatic Chronic 1, H410,M=1 Asp. Tox. 1, H304; Eye Irrit. 2, H319
Non-Hazardous Additives	Trade Secret			1 - 15	Substance not classified as hazardous
HYDROXYPROPYL METHACRYLATE	27813-02-1	248-666-3		1 - 10	Eye Irrit. 2, H319; Skin Sens. 1, H317
α, α-dimethylbenzyl hydroperoxide	80-15-9	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; STOT SE 3, H335; STOT RE 1, H372; Aquatic Chronic 2, H411
Naphthalene, (1-methylethyl)-	29253-36-9	249-535-3		< 1	Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1
2,2'-(p-Tolylimino)diethanol	3077-12-1	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	81-07-2	201-321-0		<= 1	Substance not classified as hazardous

acrylic acid	79-10-7	201-177-9	01-2119452449-31	< 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	114-83-0	204-055-3		<= 0.7	Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335 Acute Tox. 3, H311; Acute Tox. 3, H301; Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=10
N,N-dimethyl-p-toluidine	99-97-8	202-805-4		<= 0.3	Acute Tox. 3, H331; Acute Tox. 3, H311; Acute Tox. 3, H301; STOT RE 2, H373; Aquatic Chronic 3, H412 - Nota C

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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

Skin contact
Immediately 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
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
Exposure to extreme heat can give rise to thermal decomposition.

Hazardous Decomposition or By-Products

Substance	Condition
Carbonyl fluoride.	During combustion.
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Fluoride	During combustion.
Oxides of nitrogen.	During combustion.
Perfluoroisobutylene (PFIB).	During combustion.
Oxides of sulphur.	During combustion.

5.3. Advice for fire-fighters
When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus,tunic and trousers (leggings),bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment. 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
Avoid inhalation of thermal decomposition products. For industrial/occupational use only. Not for consumer sale or use. Store work clothes separately from other clothing, food and tobacco products. 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.) No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products. 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
acrylic acid	79-10-7	UK HSC	TWA:29 mg/m3(10 ppm);STEL:59 mg/m3(20 ppm)	

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

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

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 UK HSC

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

Appearance	
Physical state	Liquid.
Colour	Yellow
Specific Physical Form:	Thixotropic liquid.
Odor	Mild Odor
Odour threshold	*No data available.*
pH	*Not applicable.*
Boiling point/boiling range	>=148.9 ºC [@ 101,324.72 Pa]
Melting point	*Not applicable.*
Flammability (solid, gas)	Not applicable.
Explosive properties	Not classified
Oxidising properties	Not classified

Flash point	>=100 ºC [*Test Method:*Tagliabue closed cup]
Autoignition temperature	*No data available.*
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	<=666.6 Pa
Relative density	1.1 [@ 20 ºC] [*Ref Std:*WATER=1]
Water solubility	Negligible
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Evaporation rate	Negligible
Vapour density	1.01 [*Ref Std:*AIR=1]
Decomposition temperature	*No data available.*
Viscosity	35,000 - 60,000 mPa-s [@ 20 ºC] [*Test Method:*Brookfield]
Density	1.1 g/ml [@ 20 ºC]

9.2. Other information

EU Volatile Organic Compounds *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.

If the product is exposed to extreme conditions of heat from misuse or equipment failure, toxic decomposition products that include hydrogen fluoride and perfluoroisobutylene can occur.

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 3M assessments.

11.1 Information on Toxicological effects

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.

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	Professional judgement	LD50 estimated to be > 5,000 mg/kg
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
HYDROXYPROPYL METHACRYLATE	Dermal	Rabbit	LD50 > 5,000 mg/kg
HYDROXYPROPYL METHACRYLATE	Ingestion	Rat	LD50 > 2,000 mg/kg
Non-Hazardous Additives	Dermal		LD50 estimated to be > 5,000 mg/kg
Non-Hazardous Additives	Ingestion		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
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
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
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
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
N,N-dimethyl-p-toluidine	Ingestion	Rat	LD50 1,650 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Guinea pig	Mild irritant
Bis(isopropyl)naphthalene	Rabbit	Minimal irritation
HYDROXYPROPYL METHACRYLATE	Rabbit	Minimal irritation
Non-Hazardous Additives	Human and animal	No significant irritation
α, α-dimethylbenzyl hydroperoxide	Rabbit	Corrosive
acrylic acid	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
Bis(isopropyl)naphthalene	Rabbit	Severe irritant
HYDROXYPROPYL METHACRYLATE	Rabbit	Moderate irritant
Non-Hazardous Additives	Professional judgement	No significant irritation
α, α-dimethylbenzyl hydroperoxide	Rabbit	Corrosive
acrylic acid	Rabbit	Corrosive
2,2'-(p-Tolylimino)diethanol	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
2,2'-ethylenedioxydiethyl dimethacrylate	Human and animal	Sensitising
Bis(isopropyl)naphthalene	Guinea pig	Not classified
HYDROXYPROPYL METHACRYLATE	Human and animal	Sensitising
Non-Hazardous Additives	Human	Not classified

acrylic acid	Guinea pig	Not classified
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
Bis(isopropyl)naphthalene	In Vitro	Not mutagenic
Bis(isopropyl)naphthalene	In vivo	Not mutagenic
HYDROXYPROPYL METHACRYLATE	In vivo	Not mutagenic
HYDROXYPROPYL METHACRYLATE	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
acrylic acid	In vivo	Not mutagenic
acrylic acid	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
Bis(isopropyl)naphthalene	Ingestion	Rat	Not carcinogenic
Non-Hazardous Additives	Not specified.	Multiple animal species	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
N,N-dimethyl-p-toluidine	Ingestion	Multiple animal species	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	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
Bis(isopropyl)naphthalene	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	during organogenesis
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	2 generation

				mg/kg/day	
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
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	Some positive data exist, but the data are not sufficient for classification	similar health hazards	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	Some positive data exist, but the data are not sufficient for classification	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	kidney and/or bladder | blood	Not classified	Mouse	NOAEL 833 mg/kg/day	78 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
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
Non-Hazardous Additives	Ingestion	hematopoietic system	Not classified	Rat	NOAEL Not available	90 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

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.

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	EC50	>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	Ricefish	Experimental	96 hours	LC50	2.44 mg/l
Bis(isopropyl)naphthalene	38640-62-9	Water flea	Experimental	48 hours	Effect Level 50%	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
Non-Hazardous Additives	Trade Secret		Data not available or insufficient for classification			
HYDROXYPROPYL METHACRYLATE	27813-02-1	Golden Orfe	Experimental	48 hours	EC50	493 mg/l
HYDROXYPROPYL METHACRYLATE	27813-02-1	Green Algae	Experimental	72 hours	EC50	>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
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	Common Carp	Estimated	96 hours	LC50	>100 mg/l
2,2'-(p-Tolylimino)diethanol	3077-12-1	Green Algae	Estimated	72 hours	EC50	>100 mg/l
2,2'-(p-Tolylimino)diethanol	3077-12-1	Water flea	Estimated	48 hours	EC50	48 mg/l
2,2'-(p-Tolylimino)diethanol	3077-12-1	Green Algae	Estimated	72 hours	NOEC	100 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	Effect Concentration 10%	0.03 mg/l
acrylic acid	79-10-7	Water flea	Experimental	21 days	NOEC	3.8 mg/l
Naphthalene, (1-methylethyl)-	29253-36-9	Green Algae	Experimental	72 hours	EC50	0.245 mg/l
Naphthalene, (1-methylethyl)-	29253-36-9	Ricefish	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
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Guppy	Estimated	96 hours	LC50	>100 mg/l
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Green algae	Experimental	72 hours	EC50	>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	Water flea	Estimated	24 hours	EC50	2 mg/l
2'-Phenylacetohydrazide	114-83-0	Zebra Fish	Estimated	96 hours	LC50	0.16 mg/l
2'-Phenylacetohydrazide	114-83-0	Zebra Fish	Estimated	16 days	NOEC	0.00049 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

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 % weight	OECD 301B - Modified sturm or CO2
Bis(isopropyl)naphthalene	38640-62-9	Data not availbl-insufficient			N/A	
Non-Hazardous Additives	Trade Secret	Data not availbl-insufficient			N/A	
HYDROXYPROPYL METHACRYLATE	27813-02-1	Experimental Biodegradation	28 days	BOD	81 % BOD/ThBOD	OECD 301C - MITI test (I)
α, α-dimethylbenzyl hydroperoxide	80-15-9	Experimental Biodegradation	28 days	BOD	0 % BOD/ThBOD	OECD 301C - MITI test (I)
2,2'-(p-Tolylimino)diethanol	3077-12-1	Estimated Biodegradation	29 days	CO2 evolution	1.5 %CO2 evolution/THC O2 evolution	OECD 301B - Modified sturm or CO2
acrylic acid	79-10-7	Estimated Photolysis		Photolytic half-life (in air)	3.2 days (t 1/2)	Other methods
acrylic acid	79-10-7	Experimental Biodegradation	28 days	BOD	81 % BOD/ThBOD	OECD 301D - Closed bottle test
Naphthalene, (1-methylethyl)-	29253-36-9	Experimental Biodegradation	28 days	CO2 evolution	63 %CO2 evolution/THC O2 evolution	OECD 310 CO2 Headspace
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Estimated Biodegradation	28 days	BOD	32.09 % BOD/ThBOD	OECD 301F - Manometric respirometry
2'-Phenylacetohydrazide	114-83-0	Estimated Biodegradation	28 days	Dissolv. Organic Carbon Deplet	97 % weight	OECD 301E - Modified OECD Scre
N,N-dimethyl-p-toluidine	99-97-8	Estimated Biodegradation	14 days	BOD	0 % BOD/ThBOD	OECD 301C - MITI test (I)

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	Other methods
Bis(isopropyl)naphthalene	38640-62-9	Experimental BCF-Carp	36 days	Bioaccumulation factor	1800-6400	OECD 305E - Bioaccumulation flow-through fish test
Non-Hazardous Additives	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
HYDROXYPROPYL METHACRYLATE	27813-02-1	Experimental Bioconcentration		Log Kow	0.97	Other methods
α, α-dimethylbenzyl hydroperoxide	80-15-9	Experimental Bioconcentration		Log Kow	1.82	Other methods
2,2'-(p-Tolylimino)diethanol	3077-12-1	Experimental Bioconcentration		Log Kow	2.0	Other methods
acrylic acid	79-10-7	Experimental Bioconcentration		Log Kow	0.46	Other methods
Naphthalene, (1-methylethyl)-	29253-36-9	Experimental BCF-Carp	56 days	Bioaccumulation factor	870	OECD 305E - Bioaccumulation flow-through fish test
1,2-Benzisothiazol-3(2H)-one 1,1-dioxide	81-07-2	Experimental Bioconcentration		Log Kow	0.3	Other methods
2'-Phenylacetohydrazide	114-83-0	Estimated BCF - Other		Bioaccumulation factor	5	Estimated: Bioconcentration factor
N,N-dimethyl-p-toluidine	99-97-8	Experimental Bioconcentration		Log Kow	1.73	Other methods

12.4. Mobility in soil
Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

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

12.6. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

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

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

EU waste code (product as sold)

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

SECTION 14: Transportation information

UU-0015-0443-8, UU-0015-0447-9

ADR/RID: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID,N.O.S.LIMITED QUANTITY, (BIS(ISOPROPYL)NAPHTHALENE), 9., III, (-), ADR Classification Code: M6.
IMDG-CODE: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,LIQUID, N.O.S., (BIS(ISOPROPYL)NAPHTHALENE), 9., III, IMDG-Code segregation code: NONE, LIMITED QUANTITY, EMS: FA,SF.
ICAO/IATA: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (BIS(ISOPROPYL)NAPHTHALENE), 9., III, fish and tree marking may be required (> 5kg/l).

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
N,N-dimethyl-p-toluidine	99-97-8	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Non-Hazardous Additives	Trade Secret	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

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.
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.
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.
H331	Toxic 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 1: Product identification numbers information was modified.
Section 01: SAP Material Numbers information was modified.
Section 15: Carcinogenicity 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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