

Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

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SECTION 1: Identification

1.1. Product identifier

3M[™] Scotch-Weld[™] Low Odor Acrylic Adhesive DP810 Tan and Low Odor Acrylic Adhesive 810 Tan, Part B

Product Identification	Numbers			
LA-DAHW-3398-	LA-D100-0072-5	LA-D100-0072-6	LA-D100-0072-7	LA-D100-0072-8
В				
62-3298-8530-5	62-3298-8730-1	62-3298-9530-4		

1.2. Recommended use and restrictions on use

Recommended use

Structural adhesive.

1.3. Supplier's details

Address:	3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone:	+65 6450 8888
Website:	www.3m.com.sg

1.4. Emergency telephone number

+65 6591 6601 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Skin Corrosion/Irritation: Category 2. Serious Eye Damage/Irritation: Category 1. Skin Sensitizer: Category 1. Reproductive Toxicity: Category 2. Chronic Aquatic Toxicity: Category 2.

2.2. Label elements SIGNAL WORD

DANGER!

Symbols

Corrosion | Exclamation mark |Health Hazard | Environment |



HAZARD STATEMENTS

Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
Toxic to aquatic life with long lasting effects.
S
Avoid release to the environment.
Wear protective gloves and eye/face protection.

Response: P305 + P351 + P33

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes.	Remove contact
	lenses, if present and easy to do. Continue rinsing.	
P310	Immediately call a POISON CENTER or doctor/physician.	
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.	
P391	Collect spillage.	

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt	
Phenoxyethyl Methacrylate	10595-06-9	10 - 40	
Hydroxypropyl Methacrylate	27813-02-1	10 - 30	
2-hydroxyethyl methacrylate	868-77-9	10 - 30	
Acrylate oligomer	41637-38-1	5 - 20	
Acrylonitrile-Butadiene Polymer	9010-81-5	5 - 20	
2-Hydroxyethyl Methacrylate Phosphate	52628-03-2	< 4	
4-Methoxyphenol	150-76-5	< 1	
Phenothiazine	92-84-2	< 1	
Vanadyl Acetylacetonate	3153-26-2	< 1	

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

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

Skin contact

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

medical attention.

Eye contact

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

If swallowed

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

4.2. Most important symptoms and effects, both acute and delayed

Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision).

4.3. Indication of any immediate medical attention and special treatment required Not applicable

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable 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

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Oxides of nitrogen.	During combustion.
Toxic vapour, gas, particulate.	During combustion.

5.3. Special protective actions 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 vapors, 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 in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard. Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from amines.

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
4-Methoxyphenol	150-76-5	ACGIH	TWA:5 mg/m3	
4-Methoxyphenol	150-76-5	Singapore PELs	TWA(8 hours):5 mg/m3	
Phenothiazine	92-84-2	ACGIH	TWA(inhalable fraction):0.5 mg/m3	A4: Not class. as human carcin, SKIN; Dermal sensitizer
Phenothiazine	92-84-2	Singapore PELs	TWA(8 hours):5 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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: Polymer laminate

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

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

Half facepiece or full facepiece supplied-air respirator

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.	
Specific Physical Form:	Paste	
Color	Green	
Odor	Mild Methacrylate	
Odour threshold	No data available.	
рН	Not applicable.	
Melting point/Freezing point	Not applicable.	
Boiling point/Initial boiling point/Boiling range	> 93 °C	
Flash point	> 93.3 °C [<i>Test Method</i> :Closed Cup]	
Evaporation rate	No data available.	
Flammability	Not applicable.	
Flammable Limits(LEL)	No data available.	
Flammable Limits(UEL)	No data available.	
Vapour pressure	<=13.3 Pa	
Vapor Density and/or Relative Vapor Density	No data available.	
Density	1.07 g/ml	
Relative density	1.07 [<i>Ref Std</i> :WATER=1]	
Water solubility	Slight (less than 10%)	
Solubility- non-water	No data available.	
Partition coefficient: n-octanol/water	No data available.	
Autoignition temperature	No data available.	
Decomposition temperature	No data available.	
Kinematic Viscosity	18,692 mm ² /sec	
VOC less H2O & exempt solvents	3.1 g/l [Details: when used as intended with Part A]	
VOC less H2O & exempt solvents	0.3 % [Details: when used as intended with Part A]	
VOC less H2O & exempt solvents	319 g/l [Test Method:tested per EPA method 24] [Details:as	
	supplied]	
Molecular weight	No data available.	

Particle Characteristics

Not applicable.

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 may occur.

10.4 Conditions to avoid

Heat.

Sparks and/or flames.

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

10.5 Incompatible materials

Amines. Reducing agents. Reactive metals

10.6 Hazardous decomposition products

Substance None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

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.

Skin contact

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. Photosensitisation: Signs/symptoms may include a sunburn-like reaction such as blistering, redness, swelling, and itching from minor exposure to sunlight.

Eye contact

Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion

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

Additional Health Effects:

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Phenoxyethyl Methacrylate	Dermal	similar compoun ds	LD50 > 2,000 mg/kg
Phenoxyethyl Methacrylate	Ingestion	similar compoun ds	LD50 > 5,000 mg/kg
2-hydroxyethyl methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-hydroxyethyl methacrylate	Ingestion	Rat	LD50 5,564 mg/kg
Acrylonitrile-Butadiene Polymer	Dermal		LD50 estimated to be $> 5,000$ mg/kg
Acrylonitrile-Butadiene Polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Hydroxypropyl Methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Hydroxypropyl Methacrylate	Ingestion	Rat	LD50 > 11,200 mg/kg
Acrylate oligomer	Dermal	Rat	LD50 > 2,000 mg/kg
Acrylate oligomer	Ingestion	Rat	LD50 > 2,000 mg/kg
2-Hydroxyethyl Methacrylate Phosphate	Ingestion	Rat	LD50 > 2,000 mg/kg
4-Methoxyphenol	Dermal	Rat	LD50 > 2,000 mg/kg
4-Methoxyphenol	Ingestion	Rat	LD50 1,630 mg/kg
Phenothiazine	Dermal	Rat	LD50 > 2,000 mg/kg
Phenothiazine	Ingestion	Rat	LD50 1,370 mg/kg
Vanadyl Acetylacetonate	Dermal	similar compoun ds	LD50 790 mg/kg
Vanadyl Acetylacetonate	Ingestion	similar compoun ds	LD50 321 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Phenoxyethyl Methacrylate	similar	No significant irritation
	compoun	
	ds	
2-hydroxyethyl methacrylate	Rabbit	Minimal irritation
Acrylonitrile-Butadiene Polymer	Professio	No significant irritation
	nal	
	judgemen	
	t	
Hydroxypropyl Methacrylate	Rabbit	Minimal irritation
Acrylate oligomer	In vitro	No significant irritation
	data	
2-Hydroxyethyl Methacrylate Phosphate	Rabbit	Corrosive
4-Methoxyphenol	Rabbit	Mild irritant
Phenothiazine	Rabbit	No significant irritation
Vanadyl Acetylacetonate	similar	Irritant

	compoun ds
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Serious Eye Damage/Irritation

Name	Species	Value
Phenoxyethyl Methacrylate	similar compoun ds	No significant irritation
2-hydroxyethyl methacrylate	Rabbit	Moderate irritant
Acrylonitrile-Butadiene Polymer	Professio nal judgemen t	No significant irritation
Hydroxypropyl Methacrylate	Rabbit	Moderate irritant
Acrylate oligomer	In vitro data	No significant irritation
2-Hydroxyethyl Methacrylate Phosphate	similar health hazards	Corrosive
4-Methoxyphenol	Rabbit	Severe irritant
Phenothiazine	Rabbit	Mild irritant
Vanadyl Acetylacetonate	similar compoun ds	Severe irritant

Sensitization:

Skin Sensitisation

Name	Species	Value
Phenoxyethyl Methacrylate	similar compoun ds	Sensitising
2-hydroxyethyl methacrylate	Human and animal	Sensitising
Hydroxypropyl Methacrylate	Human and animal	Sensitising
Acrylate oligomer	Multiple animal species	Not classified
2-Hydroxyethyl Methacrylate Phosphate	Mouse	Sensitising
4-Methoxyphenol	Guinea pig	Sensitising
Phenothiazine	Guinea pig	Sensitising
Vanadyl Acetylacetonate	similar compoun ds	Not classified

Photosensitisation

Name	Species	Value
Phenothiazine	Human	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value

3MTM Scotch-WeldTM Low Odor Acrylic Adhesive DP810 Tan and Low Odor Acrylic Adhesive 810 Tan, Part B

Phenoxyethyl Methacrylate	In Vitro	Not mutagenic
2-hydroxyethyl methacrylate	In vivo	Not mutagenic
2-hydroxyethyl methacrylate	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
Acrylate oligomer	In Vitro	Not mutagenic
2-Hydroxyethyl Methacrylate Phosphate	In Vitro	Not mutagenic
4-Methoxyphenol	In vivo	Not mutagenic
4-Methoxyphenol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Phenothiazine	In Vitro	Not mutagenic
Phenothiazine	In vivo	Not mutagenic
Vanadyl Acetylacetonate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
4-Methoxyphenol	Dermal	Multiple	Not carcinogenic
		animal	
		species	
4-Methoxyphenol	Ingestion	Multiple animal species	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
Phenoxyethyl Methacrylate	Ingestion	Toxic to female reproduction	similar compoun ds	NOAEL 300 mg/kg/day	premating into lactation
Phenoxyethyl Methacrylate	Ingestion	Toxic to development	similar compoun ds	NOAEL 300 mg/kg/day	premating into lactation
2-hydroxyethyl methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-hydroxyethyl methacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
2-hydroxyethyl methacrylate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
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
Acrylate oligomer	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Acrylate oligomer	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	28 days
Acrylate oligomer	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation
2-Hydroxyethyl Methacrylate Phosphate	Ingestion	Not classified for development	Rat	NOAEL 1,000	during gestation

				mg/kg/day	
4-Methoxyphenol	Ingestion	Not classified for female reproduction	Rat	NOAEL 300	premating
				mg/kg/day	into lactation
4-Methoxyphenol	Ingestion	Not classified for male reproduction	Rat	NOAEL 300	28 days
	-	_		mg/kg/day	-
4-Methoxyphenol	Ingestion	Not classified for development	Rat	NOAEL 200	during
	-			mg/kg/day	gestation
Phenothiazine	Ingestion	Not classified for development	Rat	NOAEL 150	during
	-	-		mg/kg/day	organogenesis

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	
2-Hydroxyethyl Methacrylate Phosphate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
4-Methoxyphenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
Vanadyl Acetylacetonate	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
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
Acrylate oligomer	Ingestion	hematopoietic system liver immune system kidney and/or bladder endocrine system eyes	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
2-Hydroxyethyl Methacrylate Phosphate	Ingestion	hematopoietic system kidney and/or bladder heart liver immune system eyes	Not classified	Rat	NOAEL 300 mg/kg/day	90 days
4-Methoxyphenol	Ingestion	gastrointestinal tract	Not classified	Rat	LOAEL 300 mg/kg/day	28 days
4-Methoxyphenol	Ingestion	liver immune system	Not classified	Rat	NOAEL 300 mg/kg/day	28 days
4-Methoxyphenol	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 300 mg/kg/day	28 days
4-Methoxyphenol	Ingestion	heart endocrine system hematopoietic system nervous system respiratory system	Not classified	Rat	NOAEL 300 mg/kg/day	28 days
Phenothiazine	Ingestion	hematopoietic system	May cause damage to organs though prolonged or repeated	Dog	NOAEL 18 mg/kg/day	13 weeks

			exposure			
Phenothiazine	Ingestion	heart endocrine system liver kidney and/or bladder respiratory system	Not classified	Dog	NOAEL 67 mg/kg/day	13 weeks

Aspiration Hazard

For the component/components, either no data are currently available or the data are 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.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:

GHS Acute 2: Toxic to aquatic life.

Chronic aquatic hazard:

GHS Chronic 2: Toxic to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Туре	Exposure	Test endpoint	Test result
Phenoxyethyl Methacrylate	10595-06-9	Activated sludge	Analogous Compound	3 hours	EC50	177 mg/l
Phenoxyethyl Methacrylate	10595-06-9	Golden Orfe	Analogous Compound	96 hours	LC50	10 mg/l
Phenoxyethyl Methacrylate	10595-06-9	Green algae	Analogous Compound	96 hours	ErC50	4.4 mg/l
Phenoxyethyl Methacrylate	10595-06-9	Water flea	Analogous Compound	48 hours	EC50	1.21 mg/l
Phenoxyethyl Methacrylate	10595-06-9	Green algae	Analogous Compound	96 hours	ErC10	0.74 mg/l
2-hydroxyethyl methacrylate	868-77-9	Turbot	Analogous Compound	96 hours	LC50	833 mg/l
2-hydroxyethyl methacrylate	868-77-9	Fathead minnow	Experimental	96 hours	LC50	227 mg/l
2-hydroxyethyl methacrylate	868-77-9	Green algae	Experimental	72 hours	EC50	710 mg/l
2-hydroxyethyl methacrylate	868-77-9	Water flea	Experimental	48 hours	EC50	380 mg/l
2-hydroxyethyl methacrylate	868-77-9	Green algae	Experimental	72 hours	NOEC	160 mg/l
2-hydroxyethyl methacrylate	868-77-9	Water flea	Experimental	21 days	NOEC	24.1 mg/l
2-hydroxyethyl methacrylate	868-77-9	N/A	Experimental	16 hours	EC0	>3,000 mg/l
2-hydroxyethyl methacrylate	868-77-9	N/A	Experimental	18 hours	LD50	<98 mg per kg of bodyweight
Hydroxypropyl Methacrylate	27813-02-1	Bacteria	Experimental	N/A	EC10	1,140 mg/l
Hydroxypropyl	27813-02-1	Golden Orfe	Experimental	48 hours	EC50	493 mg/l

Methacrylate						
Hydroxypropyl	27813-02-1	Green algae	Experimental	72 hours	ErC50	>97.2 mg/l
Methacrylate	27013 02 1	Green argue	Experimental	72 110013	LICSU	-) / .2 mg/1
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
Acrylate oligomer	41637-38-1	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Acrylate oligomer	41637-38-1	Rainbow trout	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
Acrylate oligomer	41637-38-1	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Acrylate oligomer	41637-38-1	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	100 mg/l
Acrylate oligomer	41637-38-1	Water flea	Analogous Compound	21 days	No tox obs at lmt of water sol	100 mg/l
Acrylate oligomer	41637-38-1	Zebra Fish	Analogous Compound	34 days	No tox obs at lmt of water sol	100 mg/l
Acrylate oligomer	41637-38-1	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Acrylonitrile- Butadiene Polymer	9010-81-5	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
2-Hydroxyethyl Methacrylate Phosphate	52628-03-2	Green algae	Experimental	72 hours	EC50	>120 mg/l
2-Hydroxyethyl Methacrylate Phosphate	52628-03-2	Rainbow trout	Experimental	96 hours	LC50	>112 mg/l
2-Hydroxyethyl Methacrylate Phosphate	52628-03-2	Water flea	Experimental	48 hours	EC50	68 mg/l
2-Hydroxyethyl Methacrylate Phosphate	52628-03-2	Green algae	Experimental	72 hours	NOEC	30 mg/l
4-Methoxyphenol	150-76-5	Ciliated protozoa	Experimental	40 hours	IC50	171.4 mg/l
4-Methoxyphenol	150-76-5	Green algae	Experimental	72 hours	ErC50	54.7 mg/l
4-Methoxyphenol	150-76-5	Rainbow trout	Experimental	96 hours	LC50	28.5 mg/l
4-Methoxyphenol	150-76-5	Water flea	Experimental	48 hours	EC50	2.2 mg/l
4-Methoxyphenol	150-76-5	Green algae	Experimental	72 hours	NOEC	2.96 mg/l
4-Methoxyphenol	150-76-5	Water flea	Experimental	21 days	NOEC	0.68 mg/l
Phenothiazine	92-84-2	Activated sludge	Experimental	3 hours	IC50	>100 mg/l
Phenothiazine	92-84-2	Ciliated protozoa	Experimental	48 hours	IC50	8 mg/l
Phenothiazine	92-84-2	Green algae	Experimental	72 hours	ErC50	>100 mg/l
Phenothiazine	92-84-2	Rainbow trout	Experimental	96 hours	LC50	0.597 mg/l
Phenothiazine	92-84-2	Water flea	Experimental	48 hours	EC50	0.154 mg/l
Vanadyl Acetylacetonate	3153-26-2	Bluegill	Estimated	96 hours	LC50	10 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Phenoxyethyl Methacrylate	10595-06-9	Analogous Compound Biodegradation	28 days	BOD	22.3 %BOD/ThOD	OECD 301D - Closed bottle test
Phenoxyethyl Methacrylate	10595-06-9	Experimental Hydrolysis		Hydrolytic half-life (pH 7)		OECD 111 Hydrolysis func of pH
2-hydroxyethyl methacrylate	868-77-9	Experimental Biodegradation	28 days	BOD	84 %BOD/COD	OECD 301D - Closed bottle test
2-hydroxyethyl	868-77-9	Experimental		Hydrolytic half-life	10.9 days (t 1/2)	OECD 111 Hydrolysis func

methacrylate		Hydrolysis		basic pH		of pH
Hydroxypropyl Methacrylate	27813-02-1	Experimental Biodegradation	28 days	BOD	81 %BOD/ThOD	OECD 301C - MITI test (I)
Acrylate oligomer	41637-38-1	Experimental Biodegradation	28 days	BOD	24 %BOD/ThOD	OECD 301D - Closed bottle test
Acrylonitrile- Butadiene Polymer	9010-81-5	Data not available- insufficient	N/A	N/A	N/A	N/A
2-Hydroxyethyl Methacrylate Phosphate	52628-03-2	Experimental Biodegradation	28 days	BOD	93.1 %BOD/ThOD	OECD 301F - Manometric respirometry
4-Methoxyphenol	150-76-5	Experimental Biodegradation - Anaerobic	28 days	Percent degraded	>90 %degraded	
4-Methoxyphenol	150-76-5	Experimental Biodegradation	28 days	BOD	86 %BOD/ThOD	OECD 301C - MITI test (I)
Phenothiazine	92-84-2	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301D - Closed bottle test
Vanadyl Acetylacetonate	3153-26-2	Data not available- insufficient	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Phenoxyethyl Methacrylate	10595-06-9	Modeled Bioconcentration		Bioaccumulation factor	5.8	Catalogic TM
Phenoxyethyl Methacrylate	10595-06-9	Experimental Bioconcentration		Log Kow	3.137	OECD 117 log Kow HPLC method
2-hydroxyethyl methacrylate	868-77-9	Experimental Bioconcentration		Log Kow	0.42	OECD 107 log Kow shke flsk mtd
Hydroxypropyl Methacrylate	27813-02-1	Experimental Bioconcentration		Log Kow	0.97	EC A.8 Partition Coefficient
Acrylate oligomer	41637-38-1	Modeled Bioconcentration		Bioaccumulation factor	7	Catalogic™
Acrylate oligomer	41637-38-1	Experimental Bioconcentration		Log Kow	≥4.66	OECD 117 log Kow HPLC method
Acrylonitrile- Butadiene Polymer	9010-81-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-Hydroxyethyl Methacrylate Phosphate	52628-03-2	Experimental Bioconcentration		Log Kow	1 - 2.72	OECD 117 log Kow HPLC method
4-Methoxyphenol	150-76-5	Experimental Bioconcentration		Log Kow	1.58	
Phenothiazine	92-84-2	Experimental BCF - Fish	56 days	Bioaccumulation factor	660	
Phenothiazine	92-84-2	Experimental Bioconcentration		Log Kow	3.78	OECD 117 log Kow HPLC method
Vanadyl Acetylacetonate	3153-26-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Disposal 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.

SECTION 14: Transport Information

International Regulations

UN No.: UN3082 UN Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transportation Class (IMO): 9-9 Miscellaneous dangerous goods Transportation Class (IATA): 9-9 Miscellaneous dangerous goods Other Dangerous Goods Descriptions (IMO): None assigned Other Dangerous Goods Descriptions (IATA): None assigned Packing Group: III Marine pollutant: Yes

SECTION 15: Regulatory information

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

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 Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. 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.

This product may contain component(s) that are regulated by the following:

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Fire Safety (Petroleum and Flammable Materials) Regulations: This product is subject to the requirements in the Regulations

SECTION 16: Other information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

3M Singapore SDSs are available at www.3m.com.sg