Safety Data Sheet

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 A

Product Identification Numbers

LA-DAHW-3298-A	LA-D100-0072-1	LA-D100-0072-2	LA-D100-0072-3	LA-D100-0072-4
62-3398-8530-3	62-3398-8730-9	62-3398-9530-2		

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 6888 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 2.
Skin Sensitizer: Category 1.
Specific Target Organ Toxicity (repeated exposure): Category 2.
Chronic Aquatic Toxicity: Category 2.

2.2. Label elements
SIGNAL WORD
DANGER!

Symbols
Corrosion | Exclamation mark | Health Hazard | Environment |

Pictograms

HAZARD STATEMENTS

H318	Causes serious eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure: nervous system respiratory system
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280B	Wear protective gloves and eye/face protection.
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.
P310	Immediately call a POISON CENTER or doctor/physician.
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.

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
2-hydroxyethyl methacrylate	868-77-9	10 - 30
Hydroxypropyl Methacrylate	27813-02-1	10 - 30
Acrylate oligomer	41637-38-1	5 - 20
Acrylonitrile-Butadiene Polymer	9010-81-5	5 - 20
α,α-Dimethylbenzyl hydroperoxide	80-15-9	1 - 5
2,2'-Methylenebis[6-tert-butyl-p-cresol]	119-47-1	< 1
Cumene	98-82-8	< 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
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. 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

Substance	Condition
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. 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. 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
α,α-Dimethylbenzyl hydroperoxide	80-15-9	AIHA	TWA:6 mg/m3(1 ppm)	SKIN
Cumene	98-82-8	ACGIH	TWA:50 ppm	
Cumene	98-82-8	Singapore PELs	TWA(8 hours):246 mg/m3(50 ppm)	

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.
Gloves made from the following material(s) are recommended: Butyl rubber.
Fluoroelastomer

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Paste
Appearance/Odour	white, low odour
Odour threshold	*No data available.*
pH	*Not applicable.*
Melting point/Freezing point	*Not applicable.*
Boiling point/Initial boiling point/Boiling range	>=102.8 ºC
Flash point	102.2 ºC [*Test Method:*Closed Cup]
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	<=13.3 Pa
Vapour density	*Not applicable.*
Density	1.07 g/ml
Relative density	1.07 [*Ref Std:*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.*
Viscosity	20,000 mPa-s
Molecular weight	*No data available.*
VOC less H2O & exempt solvents	3.1 g/l [*Details:*when used as intended with Part B]
VOC less H2O & exempt solvents	0.3 % [*Details:*when used as intended with Part B]
VOC less H2O & exempt solvents	349 g/l [*Test Method:*tested per EPA method 24] [*Details:*as supplied]

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	Condition
None known.	

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
May be harmful if inhaled. 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
May be harmful in contact with skin.
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.

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
May be harmful if swallowed.
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.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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 ATE2,000 - 5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Phenoxyethyl Methacrylate	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Phenoxyethyl Methacrylate	Ingestion		LD50 estimated to be 2,000 - 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 > 2,000 mg/kg
Acrylate oligomer	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Acrylate oligomer	Ingestion	Rat	LD50 > 2,000 mg/kg
α,α-Dimethylbenzyl hydroperoxide	Dermal	Rat	LD50 500 mg/kg
α,α-Dimethylbenzyl hydroperoxide	Inhalation-Vapor (4 hours)	Rat	LC50 1.4 mg/l
α,α-Dimethylbenzyl hydroperoxide	Ingestion	Rat	LD50 382 mg/kg
Cumene	Dermal	Rabbit	LD50 > 3,160 mg/kg
Cumene	Inhalation-Vapor (4 hours)	Rat	LC50 39.4 mg/l
Cumene	Ingestion	Rat	LD50 1,400 mg/kg
2,2'-Methylenebis[6-tert-butyl-p-cresol]	Dermal	Rabbit	LD50 > 10,000 mg/kg
2,2'-Methylenebis[6-tert-butyl-p-cresol]	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Phenoxyethyl Methacrylate	similar compounds	Irritant
2-hydroxyethyl methacrylate	Rabbit	Minimal irritation
Acrylonitrile-Butadiene Polymer	Professio	No significant irritation

	nal judgemen t	
Hydroxypropyl Methacrylate	Rabbit	Minimal irritation
α,α-Dimethylbenzyl hydroperoxide	Rabbit	Corrosive
Cumene	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Phenoxyethyl Methacrylate	similar compoun ds	Severe irritant
2-hydroxyethyl methacrylate	Rabbit	Moderate irritant
Acrylonitrile-Butadiene Polymer	Professio nal judgemen t	No significant irritation
Hydroxypropyl Methacrylate	Rabbit	Moderate irritant
α,α-Dimethylbenzyl hydroperoxide	Rabbit	Corrosive
Cumene	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
2-hydroxyethyl methacrylate	Human and animal	Sensitising
Hydroxypropyl Methacrylate	Human and animal	Sensitising
Acrylate oligomer	Guinea pig	Not classified
Cumene	Guinea pig	Not classified

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
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
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
Cumene	In Vitro	Not mutagenic
Cumene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Hydroxypropyl Methacrylate	Inhalation	Multiple animal species	Not carcinogenic
Cumene	Inhalation	Multiple animal species	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
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
Cumene	Inhalation	Not classified for development	Rabbit	NOAEL 11.3 mg/l	during organogenesis
2,2'-Methylenebis[6-tert-butyl-p-cresol]	Ingestion	Not classified for female reproduction	Rat	NOAEL 50 mg/kg/day	premating & during gestation
2,2'-Methylenebis[6-tert-butyl-p-cresol]	Ingestion	Toxic to male reproduction	Rat	NOAEL 12.5 mg/kg/day	50 days

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	
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	
Cumene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not available
Cumene	Inhalation	respiratory irritation	May cause respiratory irritation	Human	LOAEL 0.2 mg/l	occupational exposure
Cumene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	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 |	Not classified	Rat	NOAEL 1,000 mg/kg/day	41 days

		liver | immune system | nervous system | kidney and/or bladder				
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
Cumene	Inhalation	auditory system | endocrine system | hematopoietic system | liver | nervous system | eyes	Not classified	Rat	NOAEL 59 mg/l	13 weeks
Cumene	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 4.9 mg/l	13 weeks
Cumene	Inhalation	respiratory system	Not classified	Rat	NOAEL 59 mg/l	13 weeks
Cumene	Ingestion	kidney and/or bladder | heart | endocrine system | hematopoietic system | liver | respiratory system	Not classified	Rat	NOAEL 769 mg/kg/day	6 months

Aspiration Hazard

Name	Value
Cumene	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 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	Type	Exposure	Test endpoint	Test result
Phenoxyethyl Methacrylate	10595-06-9	Golden Orfe	Experimental	96 hours	LC50	10 mg/l
Phenoxyethyl Methacrylate	10595-06-9	Green algae	Experimental	96 hours	EC50	4.1 mg/l
Phenoxyethyl Methacrylate	10595-06-9	Water flea	Experimental	48 hours	EC50	1.21 mg/l
Phenoxyethyl Methacrylate	10595-06-9	Green algae	Experimental	96 hours	Effect Concentration 10%	0.42 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
Hydroxypropyl Methacrylate	27813-02-1	Fathead minnow	Estimated	96 hours	LC50	227 mg/l
Hydroxypropyl Methacrylate	27813-02-1	Green Algae	Estimated	72 hours	EC50	710 mg/l
Hydroxypropyl Methacrylate	27813-02-1	Water flea	Estimated	48 hours	EC50	380 mg/l
Hydroxypropyl Methacrylate	27813-02-1	Green Algae	Estimated	72 hours	NOEC	160 mg/l
Hydroxypropyl Methacrylate	27813-02-1	Water flea	Estimated	21 days	NOEC	24.1 mg/l
Acrylate oligomer	41637-38-1	Green algae	Endpoint not reached	72 hours	EC50	>100 mg/l
Acrylate oligomer	41637-38-1	Green algae	Experimental	72 hours	NOEC	0.05 mg/l
Acrylonitrile-Butadiene Polymer	9010-81-5		Data not available or insufficient for classification			
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'-Methylenebis[6-tert-butyl-p-cresol]	119-47-1	Green Algae	Endpoint not reached	72 hours	EC50	>100 mg/l
2,2'-Methylenebis[6-tert-butyl-p-cresol]	119-47-1	Water flea	Endpoint not reached	48 hours	EC50	>100 mg/l
2,2'-Methylenebis[6-tert-butyl-p-cresol]	119-47-1	Ricefish	Experimental	96 hours	LC50	>100 mg/l
2,2'-Methylenebis[6	119-47-1	Green Algae	Experimental	72 hours	NOEC	1.3 mg/l

-tert-butyl-p-cresol]						
2,2'-Methylenebis[6-tert-butyl-p-cresol]	119-47-1	Water flea	Experimental	21 days	NOEC	0.34 mg/l
Cumene	98-82-8	Green algae	Experimental	72 hours	EC50	2.6 mg/l
Cumene	98-82-8	Mysid Shrimp	Experimental	96 hours	EC50	1.3 mg/l
Cumene	98-82-8	Rainbow trout	Experimental	96 hours	LC50	4.8 mg/l
Cumene	98-82-8	Green algae	Experimental	72 hours	NOEC	0.22 mg/l
Cumene	98-82-8	Water flea	Experimental	21 days	NOEC	0.35 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Phenoxyethyl Methacrylate	10595-06-9	Experimental Biodegradation	28 days	BOD	22.3 % BOD/ThBOD	OECD 301D - Closed bottle test
2-hydroxyethyl methacrylate	868-77-9	Experimental Biodegradation	14 days	BOD	95 % BOD/ThBOD	OECD 301C - MITI test (I)
Hydroxypropyl Methacrylate	27813-02-1	Estimated Biodegradation	28 days	BOD	81 % weight	OECD 301C - MITI test (I)
Acrylate oligomer	41637-38-1	Estimated Biodegradation	28 days	CO2 evolution	7-12 % weight	OECD 301B - Modified sturm or CO2
Acrylonitrile-Butadiene Polymer	9010-81-5	Data not available-insufficient			N/A	
α,α-Dimethylbenzyl hydroperoxide	80-15-9	Experimental Biodegradation	28 days	BOD	0 % BOD/ThBOD	OECD 301C - MITI test (I)
2,2'-Methylenebis[6-tert-butyl-p-cresol]	119-47-1	Experimental Biodegradation	28 days	BOD	0 % BOD/ThBOD	OECD 301C - MITI test (I)
Cumene	98-82-8	Experimental Photolysis		Photolytic half-life (in air)	4.5 days (t 1/2)	Other methods
Cumene	98-82-8	Experimental Biodegradation	14 days	BOD	33 % weight	OECD 301C - MITI test (I)

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Phenoxyethyl Methacrylate	10595-06-9	Estimated Bioconcentration		Bioaccumulation factor	5.8	Estimated: Bioconcentration factor
2-hydroxyethyl methacrylate	868-77-9	Experimental Bioconcentration		Log Kow	0.42	Other methods
Hydroxypropyl Methacrylate	27813-02-1	Estimated Bioconcentration		Log Kow	0.97	Other methods
Acrylate oligomer	41637-38-1	Estimated Bioconcentration		Bioaccumulation factor	6.6	Estimated: Bioconcentration factor
Acrylonitrile-	9010-81-5	Data not	N/A	N/A	N/A	N/A

Butadiene Polymer		available or insufficient for classification				
α,α-Dimethylbenzyl hydroperoxide	80-15-9	Experimental Bioconcentration		Log Kow	1.82	Other methods
2,2'-Methylenebis[6-tert-butyl-p-cresol]	119-47-1	Experimental BCF-Carp	60 days	Bioaccumulation factor	840	OECD 305E - Bioaccumulation flow-through fish test
Cumene	98-82-8	Estimated Bioconcentration		Bioaccumulation factor	140	Other methods

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.: Not restricted for transport.
UN Proper shipping name: Not restricted for transport.
Transportation Class (IMO): None assigned
Transportation Class (IATA): None assigned
Other Dangerous Goods Descriptions (IMO): None assigned
Other Dangerous Goods Descriptions (IATA): None assigned
Packing Group: None assigned
Marine pollutant: None assigned

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. 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.

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