Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Malaysia Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013.

SECTION 1: Identification

1.1. Product identifier
3M™ VHB™ Tape Max Promoter

Product Identification Numbers
70-0111-4565-6 70-0111-4566-4 70-0111-4567-2

1.2. Recommended use and restrictions on use

Recommended use
Adhesion Promoter

1.3. Supplier's details
ADDRESS: 3M Malaysia Sdn. Bhd., Level 8, Block F, Oasis Square, No.2, Jalan PJU 1A/7A, Ara Damansara 47301 Petaling, Jaya, Selangor
Telephone: 03-7884 2888
E Mail: 3mmyehsr@mmm.com
Website: www.3M.com.my

1.4. Emergency telephone number
+60 03-7884 2888

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Flammable Liquid: Category 2.
Serious Eye Damage/Irritation: Category 1.
Skin Sensitizer: Category 1.
Carcinogenicity: Category 1B.

2.2. Label elements
Signal word
Danger

Symbols
Flame |Corrosion |Exclamation mark |Health Hazard |

Pictograms

Hazard Statements:

H225	Highly flammable liquid and vapor.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H350	May cause cancer.

Precautionary statements

Prevention:

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280B	Wear protective gloves and eye/face protection.
P281	Use personal protective equipment as required.

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.
P370 + P378	In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

2.3. Other hazards

May cause drowsiness or dizziness.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Propyl Alcohol	71-23-8	40 - 80
Dimethyl Carbonate	616-38-6	5 - 30
d-limonene	5989-27-5	< 10
Acrylate Polymer	Trade Secret	< 5
Polyamide Resin	Trade Secret	< 5
Isopropyl Alcohol	67-63-0	< 2
Myrcene	123-35-3	< 0.5

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

Allergic skin reaction (redness, swelling, blistering, and itching). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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 flammable liquids such as dry chemical or carbon dioxide 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
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. 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 dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up
Contain spill. Cover spill area with a fire-extinguishing foam. 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 using non-sparking tools. Place in a metal container approved for

transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. 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

Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/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 oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidizing agents.

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	C.A.S. No.	Agency	Limit type	Additional Comments
Isopropyl Alcohol	67-63-0	ACGIH	TWA:200 ppm;STEL:400 ppm	A4: Not class. as human carcin
Isopropyl Alcohol	67-63-0	Malaysia OELs	TWA(8 hours):983 mg/m3(400 ppm)	
Propyl Alcohol	71-23-8	ACGIH	TWA:100 ppm	A4: Not class. as human carcin
Propyl Alcohol	71-23-8	Malaysia OELs	TWA(8 hours):492 mg/m3(200 ppm)	SKIN

ACGIH : American Conference of Governmental Industrial Hygienists
CMRG : Chemical Manufacturer's Recommended Guidelines
Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations
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/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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 exposure assessment. The following protective clothing material(s) are recommended: 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 vapors 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:	Liquid
Color	Yellow
Odor	Orange
Odor threshold	*No Data Available*
pH	6
Melting point/Freezing point	*No Data Available*
Boiling point/Initial boiling point/Boiling range	93.2 ºC [@ 101,324.72 Pa]
Flash Point	16 ºC [*Test Method:*Closed Cup]
Evaporation rate	*No Data Available*
Flammability	Flammable Liquid: Category 2.
Flammable Limits(LEL)	*No Data Available*
Flammable Limits(UEL)	*No Data Available*
Vapor Pressure	3,333.1 Pa [@ 20 ºC]
Relative Vapor Density	*No Data Available*
Density	0.85 g/ml
Relative Density	0.85 [*Ref Std:*WATER=1]
Water solubility	1 %
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	*No Data Available*
Volatile Organic Compounds	630 g/l [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*Low Solids Calculation]
Volatile Organic Compounds	73 % [*Test Method:*calculated SCAQMD rule 443.1] [*Details:*weight percent]
Percent volatile	93 % weight [*Details:*measured]
VOC Less H2O & Exempt Solvents	745 g/l [*Test Method:*calculated SCAQMD rule 443.1]
Molecular weight	*No Data Available*
Solids Content	7 %

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 polymerization will not occur.

10.4. Conditions to avoid
Sparks and/or flames

10.5. Incompatible materials
None known.

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 labeling, 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:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. 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:
May be harmful if swallowed.
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

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-Vapor(4 hr)		No data available; calculated ATE >20 - =50 mg/l
Overall product	Ingestion		No data available; calculated ATE >2,000 - =5,000 mg/kg
Propyl Alcohol	Dermal	Rabbit	LD50 4,000 mg/kg
Propyl Alcohol	Inhalation-Vapor (4 hours)	Rat	LC50 > 34 mg/l
Propyl Alcohol	Ingestion	Rat	LD50 estimated to be 2,000 - 5,000 mg/kg
Dimethyl Carbonate	Dermal		estimated to be > 5,000 mg/kg
Dimethyl Carbonate	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
Dimethyl Carbonate	Inhalation-Vapor		estimated to be > 50 mg/l
Dimethyl Carbonate	Ingestion		estimated to be > 5,000 mg/kg
d-limonene	Inhalation-Vapor (4 hours)	Mouse	LC50 > 3.14 mg/l
d-limonene	Dermal	Rabbit	LD50 > 5,000 mg/kg
d-limonene	Ingestion	Rat	LD50 4,400 mg/kg
Isopropyl Alcohol	Dermal	Rabbit	LD50 12,870 mg/kg
Isopropyl Alcohol	Inhalation-Vapor (4 hours)	Rat	LC50 72.6 mg/l
Isopropyl Alcohol	Ingestion	Rat	LD50 4,710 mg/kg
Myrcene	Dermal	Rabbit	LD50 > 5,000 mg/kg
Myrcene	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Propyl Alcohol	Rabbit	Minimal irritation
d-limonene	Rabbit	Irritant
Isopropyl Alcohol	Multiple animal species	No significant irritation
Myrcene	In vitro data	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Propyl Alcohol	Rabbit	Severe irritant
d-limonene	Rabbit	Mild irritant
Isopropyl Alcohol	Rabbit	Severe irritant
Myrcene	Rabbit	Severe irritant

Sensitization:

Skin Sensitization

Name	Species	Value
Propyl Alcohol	Guinea pig	Not classified
d-limonene	Mouse	Sensitizing
Isopropyl Alcohol	Guinea pig	Not classified
Myrcene	Mouse	Not classified

Respiratory Sensitization

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

Germ Cell Mutagenicity

Name	Route	Value
Propyl Alcohol	In Vitro	Some positive data exist, but the data are not sufficient for classification
d-limonene	In Vitro	Not mutagenic
d-limonene	In vivo	Not mutagenic
Isopropyl Alcohol	In Vitro	Not mutagenic
Isopropyl Alcohol	In vivo	Not mutagenic
Myrcene	In Vitro	Not mutagenic
Myrcene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Propyl Alcohol	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
d-limonene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Isopropyl Alcohol	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Myrcene	Ingestion	Multiple animal species	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Propyl Alcohol	Inhalation	Not classified for male reproduction	Rat	NOAEL 8.6 mg/l	6 weeks
Propyl Alcohol	Inhalation	Not classified for development	Rat	NOAEL 8.6 mg/l	during gestation
d-limonene	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	premating & during gestation
d-limonene	Ingestion	Not classified for development	Multiple animal species	NOAEL 591 mg/kg/day	during organogenesis
Isopropyl Alcohol	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	2 generation
Isopropyl Alcohol	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
Isopropyl Alcohol	Ingestion	Not classified for development	Rat	NOAEL 400 mg/kg/day	during organogenesis
Isopropyl Alcohol	Inhalation	Not classified for development	Rat	LOAEL 9 mg/l	during gestation
Myrcene	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	90 days
Myrcene	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	premating into lactation
Myrcene	Ingestion	Not classified for development	Rat	NOAEL 300 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Propyl Alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Mouse	NOAEL 5 mg/l	4 hours
Propyl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	
Propyl Alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
d-limonene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
d-limonene	Ingestion	nervous system	Not classified		NOAEL Not available	
Isopropyl Alcohol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Isopropyl Alcohol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Isopropyl Alcohol	Inhalation	auditory system	Not classified	Guinea pig	NOAEL 13.4 mg/l	24 hours
Isopropyl Alcohol	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Myrcene	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

Propyl Alcohol	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 70 mg/kg/day	83 weeks
Propyl Alcohol	Ingestion	liver	Not classified	Rat	LOAEL 70 mg/kg/day	83 weeks
d-limonene	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 75 mg/kg/day	103 weeks
d-limonene	Ingestion	liver	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
d-limonene	Ingestion	heart | endocrine system | bone, teeth, nails, and/or hair | hematopoietic system | immune system | muscles | nervous system | respiratory system	Not classified	Rat	NOAEL 600 mg/kg/day	103 weeks
Isopropyl Alcohol	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 12.3 mg/l	24 months
Isopropyl Alcohol	Inhalation	nervous system	Not classified	Rat	NOAEL 12 mg/l	13 weeks
Isopropyl Alcohol	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 400 mg/kg/day	12 weeks
Myrcene	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	14 weeks
Myrcene	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 250 mg/kg/day	14 weeks
Myrcene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	14 weeks
Myrcene	Ingestion	gastrointestinal tract | liver | respiratory system | heart | skin | endocrine system | bone, teeth, nails, and/or hair | nervous system | eyes	Not classified	Rat	NOAEL 2,000 mg/kg/day	14 weeks

Aspiration Hazard

Name	Value
d-limonene	Aspiration hazard
Myrcene	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 labeling, 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:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Propyl Alcohol	71-23-8	Activated sludge	Experimental	3 hours	IC50	>1,000 mg/l
Propyl Alcohol	71-23-8	Algae or other aquatic plants	Experimental	96 hours	EC50	4,480 mg/l
Propyl Alcohol	71-23-8	Fathead Minnow	Experimental	96 hours	LC50	4,555 mg/l
Propyl Alcohol	71-23-8	Fish	Experimental	96 hours	LC50	3,000 mg/l
Propyl Alcohol	71-23-8	Water flea	Experimental	48 hours	EC50	3,642 mg/l
Propyl Alcohol	71-23-8	Water flea	Experimental	21 days	NOEC	100 mg/l
Dimethyl Carbonate	616-38-6	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Dimethyl Carbonate	616-38-6	Green algae	Experimental	72 hours	ErC50	>100 mg/l
Dimethyl Carbonate	616-38-6	Water flea	Experimental	48 hours	EC50	>100 mg/l
Dimethyl Carbonate	616-38-6	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Dimethyl Carbonate	616-38-6	Green algae	Experimental	72 hours	NOEC	100 mg/l
Dimethyl Carbonate	616-38-6	Water flea	Experimental	21 days	NOEC	25 mg/l
d-limonene	5989-27-5	Fathead Minnow	Experimental	96 hours	LC50	0.702 mg/l
d-limonene	5989-27-5	Green algae	Experimental	72 hours	ErC50	0.32 mg/l
d-limonene	5989-27-5	Water flea	Experimental	48 hours	EC50	0.307 mg/l
d-limonene	5989-27-5	Fathead Minnow	Experimental	8 days	EC10	0.32 mg/l
d-limonene	5989-27-5	Green algae	Experimental	72 hours	ErC10	0.174 mg/l
d-limonene	5989-27-5	Water flea	Experimental	21 days	NOEC	0.153 mg/l
Acrylate Polymer	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A % weight
Polyamide Resin	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Isopropyl Alcohol	67-63-0	Bacteria	Experimental	16 hours	LOEC	1,050 mg/l
Isopropyl Alcohol	67-63-0	Green algae	Experimental	72 hours	EC50	>1,000 mg/l
Isopropyl Alcohol	67-63-0	Invertebrate	Experimental	24 hours	LC50	>10,000 mg/l
Isopropyl Alcohol	67-63-0	Medaka	Experimental	96 hours	LC50	>100 mg/l
Isopropyl Alcohol	67-63-0	Water flea	Experimental	48 hours	EC50	>1,000 mg/l
Isopropyl Alcohol	67-63-0	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
Isopropyl Alcohol	67-63-0	Water flea	Experimental	21 days	NOEC	100 mg/l
Myrcene	123-35-3	Green algae	Experimental	72 hours	ErC50	0.342 mg/l
Myrcene	123-35-3	Medaka	Experimental	96 hours	LC50	0.92 mg/l
Myrcene	123-35-3	Water flea	Experimental	48 hours	EC50	0.45 mg/l
Myrcene	123-35-3	Green algae	Experimental	72 hours	NOEC	0.23 mg/l
Myrcene	123-35-3	Water flea	Experimental	21 days	NOEC	0.12 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Propyl Alcohol	71-23-8	Experimental Biodegradation	20 days	Biological Oxygen Demand	73 %BOD/ThOD	OECD 301D - Closed Bottle Test
Dimethyl Carbonate	616-38-6	Experimental Biodegradation	28 days	Biological Oxygen Demand	86 %BOD/ThOD	OECD 301C - MITI (I)
d-limonene	5989-27-5	Experimental Biodegradation	14 days	Biological Oxygen Demand	98 %BOD/ThOD	OECD 301C - MITI (I)
d-limonene	5989-27-5	Experimental Biodegradation	14 days	Dissolv. Organic Carbon Deplet	>93.8 %removal of DOC	OECD 303A - Simulated Aerobic
Acrylate Polymer	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A

Polyamide Resin	Trade Secret	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Isopropyl Alcohol	67-63-0	Experimental Biodegradation	14 days	Biological Oxygen Demand	86 %BOD/ThOD	OECD 301C - MITI (I)
Myrcene	123-35-3	Experimental Biodegradation	28 days	Biological Oxygen Demand	76 %BOD/ThOD	OECD 301D - Closed Bottle Test
Myrcene	123-35-3	Experimental Photolysis		Photolytic half-life (in air)	1.8 hours (t 1/2)	

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Propyl Alcohol	71-23-8	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.2	
Dimethyl Carbonate	616-38-6	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.354	OECD 107 log Kow shke flsk mtd
d-limonene	5989-27-5	Modeled Bioconcentration		Bioaccumulation Factor	2100	Catalogic™
d-limonene	5989-27-5	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	4.57	
Acrylate Polymer	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polyamide Resin	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Isopropyl Alcohol	67-63-0	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	0.05	
Myrcene	123-35-3	Modeled Bioconcentration		Bioaccumulation Factor	324	Catalogic™
Myrcene	123-35-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	4.82	EC A.8 Partition Coefficient

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

According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Please approach Kualiti Alam for proper schedule waste classification and disposal.

SECTION 14: Transport Information

Marine Transport (IMDG)

UN Number:UN1133
Proper Shipping Name:ADHESIVES CONTAINING FLAMMABLE LIQUID
Technical Name: None assigned.
Hazard Class/Division:3

Subsidiary Risk: None assigned.
Packing Group:II
Limited Quantity: Yes
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Air Transport (IATA)

UN Number:UN1133
Proper Shipping Name:ADHESIVES CONTAINING FLAMMABLE LIQUID
Technical Name: None assigned.
Hazard Class/Division:3
Subsidiary Risk: None assigned.
Packing Group:II
Limited Quantity: None assigned.
Marine Pollutant: None assigned.
Marine Pollutant Technical Name: None assigned.
Other Dangerous Goods Descriptions:
None assigned.

Transportation classifications are provided as a customer service. As for shipping, YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling or marking requirements. The above information is only for reference. If you are shipping by air or ocean, YOU are advised to check & meet applicable regulatory requirements.

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.

SECTION 16: Other information

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation 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 Malaysia, you are responsible for all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

3M Malaysia SDSs are available at www.3M.com.my