

Safety Data Sheet

Copyright, 2020, 3M Company.

All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group:	19-2287-1	Version Number:	5.00
Issue Date:	09/12/2020	Supercedes Date:	17/07/2016

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[™] Undercoating, PN 08882

Product Identification Numbers 60-9801-0925-4

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Automotive undercoating for rustproofing, sound deadening.

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, SelangorTelephone:03-7884 2888E 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 Aerosol: Category 2. Gas Under Pressure: Liquefied gas. Serious Eye Damage/Irritation: Category 2. Skin Corrosion/Irritation: Category 2. Reproductive Toxicity: Category 1B. Specific Target Organ Toxicity (single exposure): Category 1. Specific Target Organ Toxicity (repeated exposure): Category 1. Chronic Aquatic Toxicity: Category 1.

2.2. Label elements Signal word Danger

Symbols Flame | Gas cylinder | Exclamation mark | Health Hazard | Environment |

Pictograms



Hazard Statements	
H223	Flammable aerosol.
H280	Contains gas under pressure; may explode if heated.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H360	May damage fertility or the unborn child.
H370	Causes damage to organs: cardiovascular system
H371	May cause damage to organs: cardiovascular system
H372	Causes damage to organs through prolonged or repeated exposure: nervous system sensory organs
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statements General:	
P102	Keep out of reach of children.
P103	Read label before use.
P101	If medical advice is needed, have product container or label at hand.
Prevention:	
P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P281	Use personal protective equipment as required.
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.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P307 + P311	IF exposed: Call a POISON CENTER or doctor/physician.
Storage:	
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.
P403	Store in a well-ventilated place.

P405

Store locked up.

Disposal:

P501

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

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
Acetone	67-64-1	30 - 60
Propane	74-98-6	10 - 30
Toluene	108-88-3	10 - 30
Butane	106-97-8	5 - 10
Hydrogenated Styrene-Butadiene Polymer	66070-58-4	3 - 7
Naphtha (Petroleum), Light Steam-Cracked,	64742-89-8	3 - 7
Debenzenized, Polymers, Hydrogenated		
Octamethylcyclotetrasiloxane	556-67-2	3 - 7
Clay	68953-58-2	1 - 5

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. Get medical attention.

Skin Contact:

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

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Use a fire fighting agent suitable for the surrounding fire.

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>
Formaldehyde
Carbon monoxide
Carbon dioxide

Condition

During Combustion During Combustion 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.

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

If possible, seal leaking container. Place leaking containers in a well-ventilated area, preferably an operating exhaust hood, or if necessary outdoors on an impermeable surface until appropriate packaging for the leaking container or its contents is available. Contain spill. Cover spill area with a fire extinguishing foam that is resistant to polar solvents. 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 detergent and water. 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

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. 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. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Do not use in a confined area with minimal air exchange.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50C/122F. Protect from sunlight. Store in a well-ventilated place. Store away from heat. 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
Butane	106-97-8	ACGIH	STEL:1000 ppm	
Butane	106-97-8	Malaysia OELs	TWA(8 hours):1900	
			mg/m3(800 ppm)	
Natural gas	106-97-8	ACGIH	Limit value not established:	simple asphyxiant
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human
				carcin, Ototoxicant
Toluene	108-88-3	Malaysia OELs	TWA(8 hours):188 mg/m3(50	SKIN
			ppm)	
Naphtha	64742-89-8	Malaysia OELs	TWA(8 hours):1590	
			mg/m3(400 ppm)	
Acetone	67-64-1	ACGIH	TWA:250 ppm;STEL:500 ppm	A4: Not class. as human
				carcin
Acetone	67-64-1	Malaysia OELs	TWA(8 hours):1187	
			mg/m3(500 ppm)	
Propane	74-98-6	ACGIH	Limit value not established:	simple asphyxiant
Propane	74-98-6	Malaysia OELs	TWA(8 hours):2500 ppm	

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.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

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 vapors 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:	Aerosol	
Color	Black	
Odor	Solvent	
Odor threshold	No Data Available	
рН	Not Applicable	
Melting point/Freezing point	No Data Available	
Boiling point/Initial boiling point/Boiling range	No Data Available	
Flash Point	-28.9 °C	
Evaporation rate	> 1 Units not avail. or not appl. [<i>Ref Std</i> :ETHER=1]	
Flammability (solid, gas)	Not Applicable	
Flammable Limits(LEL)	0.9 %	
Flammable Limits(UEL)	12.8 %	
Vapor Pressure	No Data Available	
Vapor Density and/or Relative Vapor Density	> 1 Units not avail. or not appl. [<i>Ref Std</i> :AIR=1]	
Density	0.8 kg/l [Details: Refers to density of the liquid]	
Density	0.78 g/ml	
Relative Density	0.78 [<i>Ref Std</i> :WATER=1]	
Water solubility	Moderate	
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/Kinematic Viscosity	No Data Available	
Volatile Organic Compounds	289 g/l [Test Method:calculated SCAQMD rule 443.1]	
Volatile Organic Compounds	37 % weight [<i>Test Method</i> :calculated per CARB title 2]	
Percent volatile	79 % weight [Test Method: Estimated]	
VOC Less H2O & Exempt Solvents	486 g/l [Test Method:calculated SCAQMD rule 443.1]	

Nanoparticles

This material does not contain nanoparticles.

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

Heat

10.5. Incompatible materials None known.

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 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:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and 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.

Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

Prolonged or repeated exposure may cause target organ effects:

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

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.

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Acetone	Dermal	Rabbit	LD50 > 15,688 mg/kg
Acetone	Inhalation- Vapor (4 hours)	Rat	LC50 76 mg/l
Acetone	Ingestion	Rat	LD50 5,800 mg/kg
Propane	Inhalation- Gas (4 hours)	Rat	LC50 > 200,000 ppm
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation- Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Butane	Inhalation- Gas (4 hours)	Rat	LC50 277,000 ppm
Hydrogenated Styrene-Butadiene Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Hydrogenated Styrene-Butadiene Polymer	Ingestion		LD50 estimated to be > 5,000 mg/kg
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	Dermal	Rabbit	LD50 3,000 mg/kg
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	Inhalation- Vapor (4 hours)	Rat	LC50 > 5.2 mg/l
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	Ingestion	Rat	LD50 > 5,000 mg/kg
Octamethylcyclotetrasiloxane	Dermal	Rat	LD50 > 2,400 mg/kg
Octamethylcyclotetrasiloxane	Inhalation- Dust/Mist (4 hours)	Rat	LC50 36 mg/l
Octamethylcyclotetrasiloxane	Ingestion	Rat	LD50 > 5,000 mg/kg
Clay	Dermal		LD50 estimated to be > 5,000 mg/kg
Clay	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 12.6 mg/l
Clay	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Acetone	Mouse	Minimal irritation
Propane	Rabbit	Minimal irritation
Toluene	Rabbit	Irritant
Butane	Professio	No significant irritation
	nal	-

	judgemen t	
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	Rabbit	Irritant
Octamethylcyclotetrasiloxane	Rabbit	Minimal irritation
Clay	Rat	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Acetone	Rabbit	Severe irritant
Propane	Rabbit	Mild irritant
Toluene	Rabbit	Moderate irritant
Butane	Rabbit	No significant irritation
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers,	Rabbit	No significant irritation
Hydrogenated		
Octamethylcyclotetrasiloxane	Rabbit	No significant irritation
Clay	Rabbit	No significant irritation

Sensitization:

Skin Sensitization

Name	Species	Value
Toluene	Guinea pig	Not classified
Octamethylcyclotetrasiloxane	Human and animal	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
Acetone	In vivo	Not mutagenic
Acetone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Propane	In Vitro	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Butane	In Vitro	Not mutagenic
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	In Vitro	Not mutagenic
Octamethylcyclotetrasiloxane	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Acetone	Not	Multiple	Not carcinogenic
	Specified	animal	
		species	
Toluene	Dermal	Mouse	Some positive data exist, but the data are not
			sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not
			sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not
			sufficient for classification
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized,	Dermal	Mouse	Some positive data exist, but the data are not
Polymers, Hydrogenated			sufficient for classification

Reproductive Toxicity

Name	Route	Value	Species	Test Result	Exposure Duration
Acetone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,700 mg/kg/day	13 weeks
Acetone	Inhalation	Not classified for development	Rat	NOAEL 5.2 mg/l	during organogenesis
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
Octamethylcyclotetrasiloxane	Inhalation	Not classified for male reproduction	Rat	NOAEL 8.5 mg/l	2 generation
Octamethylcyclotetrasiloxane	Ingestion	Toxic to female reproduction	Rabbit	NOAEL 50 mg/kg/day	during organogenesis
Octamethylcyclotetrasiloxane	Inhalation	Toxic to female reproduction	Rat	NOAEL 3.6 mg/l	2 generation

Reproductive and/or Developmental Effects

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Acetone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Acetone	Inhalation			Human	NOAEL Not available	
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 hours
Acetone	Inhalation	liver	Not classified	Guinea pig	NOAEL Not available	
Acetone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Propane	Inhalation	cardiac sensitization	Causes damage to organs	Human	NOAEL Not available	
Propane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Propane	Inhalation	respiratory irritation	Not classified	Human	NOAEL Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Butane	Inhalation	cardiac sensitization	Causes damage to organs	Human	NOAEL Not available	
Butane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Butane	Inhalation	heart	Not classified	Dog	NOAEL 5,000 ppm	25 minutes
Butane	Inhalation	respiratory irritation	Not classified	Rabbit	NOAEL Not available	
Naphtha (Petroleum), Light Steam-Cracked,	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and	NOAEL Not available	

Debenzenized, Polymers, Hydrogenated				animal		
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Acetone	Dermal	eyes	Not classified	Guinea pig	NOAEL Not available	3 weeks
Acetone	Inhalation	hematopoietic system	Not classified	Human	NOAEL 3 mg/l	6 weeks
Acetone	Inhalation	immune system	Not classified	Human	NOAEL 1.19 mg/l	6 days
Acetone	Inhalation	kidney and/or bladder	Not classified	Guinea pig	NOAEL 119 mg/l	not available
Acetone	Inhalation	heart liver	Not classified	Rat	NOAEL 45 mg/l	8 weeks
Acetone	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 900 mg/kg/day	13 weeks
Acetone	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 200 mg/kg/day	13 weeks
Acetone	Ingestion	liver	Not classified	Mouse	NOAEL 3,896 mg/kg/day	14 days
Acetone	Ingestion	eyes	Not classified	Rat	NOAEL 3,400 mg/kg/day	13 weeks
Acetone	Ingestion	respiratory system	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Acetone	Ingestion	muscles	Not classified	Rat	NOAEL 2,500 mg/kg	13 weeks
Acetone	Ingestion	skin bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 11,298 mg/kg/day	13 weeks
Toluene	Inhalation	auditory system eyes olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart liver kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal	NOAEL 11.3 mg/l	15 weeks

				species		
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
Butane	Inhalation	kidney and/or bladder blood	Not classified	Rat	NOAEL 4,489 ppm	90 days
Octamethylcyclotetrasilox ane	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 960 mg/kg/day	3 weeks
Octamethylcyclotetrasilox ane	Inhalation	liver	Not classified	Rat	NOAEL 8.5 mg/l	13 weeks
Octamethylcyclotetrasilox ane	Inhalation	endocrine system immune system kidney and/or bladder	Not classified	Rat	NOAEL 8.5 mg/l	2 generation
Octamethylcyclotetrasilox ane	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 8.5 mg/l	13 weeks
Octamethylcyclotetrasilox ane	Ingestion	liver	Not classified	Rat	NOAEL 1,600 mg/kg/day	2 weeks

Aspiration Hazard

Name	Value
Toluene	Aspiration hazard
Naphtha (Petroleum), Light Steam-Cracked, Debenzenized, Polymers, Hydrogenated	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 3: Harmful to aquatic life.

Chronic aquatic hazard:

GHS Chronic 1: Very toxic to aquatic life with long lasting effects.

No product test data available

Material	Cas #	Organism	Туре	Exposure	Test Endpoint	Test Result
Acetone	67-64-1	Algae other	Experimental	96 hours	Effect	11,493 mg/l
					Concentration	

	1			Ι	50%	
Acetone	67-64-1	Crustecea other	Experimental	24 hours	Lethal Concentration 50%	2,100 mg/l
Acetone	67-64-1	Rainbow Trout	Experimental	96 hours	Lethal Concentration 50%	5,540 mg/l
Acetone	67-64-1	Water flea	Experimental	21 days	No obs Effect Conc	1,000 mg/l
Propane	74-98-6		Data not available or insufficient for classification			
Toluene	108-88-3	Coho Salmon	Experimental	96 hours	Lethal Concentration 50%	5.5 mg/l
Toluene	108-88-3	Fish other	Experimental	96 hours	Lethal Concentration 50%	6.41 mg/l
Toluene	108-88-3	Green Algae	Experimental	72 hours	Effect Concentration 50%	12.5 mg/l
Toluene	108-88-3	Water flea	Experimental	48 hours	Effect Concentration 50%	3.78 mg/l
Toluene	108-88-3	Coho salmon	Experimental	40 days	No obs Effect Conc	3.2 mg/l
Toluene	108-88-3	Water flea	Experimental	7 days	No obs Effect Conc	0.74 mg/l
Butane	106-97-8		Data not available or insufficient for classification			
Hydrogenated Styrene- Butadiene Polymer	66070-58-4		Data not available or insufficient for classification			
Naphtha (Petroleum), Light Steam- Cracked, Debenzenized, Polymers, Hydrogenated	64742-89-8	Fathead Minnow	Estimated	96 hours	Lethal Level 50%	4.1 mg/l
Naphtha (Petroleum), Light Steam- Cracked, Debenzenized, Polymers, Hydrogenated	64742-89-8	Water flea	Estimated	48 hours	Effect Level 50%	4.5 mg/l
Naphtha (Petroleum), Light Steam- Cracked,	64742-89-8	Green algae	Experimental	72 hours	Effect Level 50%	11 mg/l

Debenzenized,						
Polymers,						
Hydrogenated						
Naphtha	64742-89-8	Water flea	Estimated	21 days	No obs Effect	2.6 mg/l
(Petroleum),					Level	_
Light Steam-						
Cracked,						
Debenzenized,						
Polymers,						
Hydrogenated						
Naphtha	64742-89-8	Green algae	Experimental	72 hours	No obs Effect	0.1 mg/l
(Petroleum),		-	_		Level	_
Light Steam-						
Cracked,						
Debenzenized,						
Polymers,						
Hydrogenated						
Octamethylcycl	556-67-2	Rainbow Trout	Experimental	93 days	No obs Effect	0.0044 mg/l
otetrasiloxane					Conc	
Octamethylcycl	556-67-2	Water flea	Experimental	21 days	No obs Effect	0.0079 mg/l
otetrasiloxane			_		Conc	_
Clay	68953-58-2	Green algae	Estimated	72 hours	Effect	>100 mg/l
-		_			Concentration	_
					50%	
Clay	68953-58-2	Water flea	Estimated	48 hours	Effect	>100 mg/l
					Concentration	
					50%	
Clay	68953-58-2	Zebra Fish	Estimated	96 hours	Lethal	>100 mg/l
					Concentration	
					50%	

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Acetone	67-64-1	Experimental		Photolytic half-	147 days (t 1/2)	Other methods
		Photolysis		life (in air)		
Acetone	67-64-1	Experimental	28 days	Biological	78 % weight	OECD 301D - Closed
		Biodegradation		Oxygen		Bottle Test
				Demand		
Propane	74-98-6	Experimental		Photolytic half-	27.5 days (t	Other methods
		Photolysis		life (in air)	1/2)	
Toluene	108-88-3	Experimental		Photolytic half-	5.2 days (t 1/2)	Other methods
		Photolysis		life (in air)		
Toluene	108-88-3	Experimental	20 days	Biological	80 % weight	
		Biodegradation		Oxygen		
				Demand		
Butane	106-97-8	Experimental		Photolytic half-	12.3 days (t	Other methods
		Photolysis		life (in air)	1/2)	
Hydrogenated	66070-58-4	Data not			N/A	
Styrene-		availbl-				
Butadiene		insufficient				
Polymer						
Naphtha	64742-89-8	Estimated	28 days	Biological	77.05 %	OECD 301F -
(Petroleum),		Biodegradation		Oxygen	BOD/ThBOD	Manometric Respiro
Light Steam-				Demand		

Cracked,						
Debenzenized,						
Polymers,						
Hydrogenated						
Octamethylcycl	556-67-2	Experimental		Photolytic half-	31 days (t 1/2)	Other methods
otetrasiloxane		Photolysis		life (in air)		
Octamethylcycl	556-67-2	Experimental		Hydrolytic	69.3-144 hours	Other methods
otetrasiloxane		Hydrolysis		half-life	(t 1/2)	
Octamethylcycl	556-67-2	Experimental	28 days	Carbon dioxide	3.7 % weight	OECD 310 CO2
otetrasiloxane		Biodegradation	-	evolution	-	Headspace
Clay	68953-58-2	Estimated	28 days	Biological	3 %	OECD 301D - Closed
-		Biodegradation	-	Oxygen	BOD/ThBOD	Bottle Test
		_		Demand		

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Acetone	67-64-1	Experimental Bioconcentrati on		Log of Octanol/H2O part. coeff	-0.24	Other methods
Propane	74-98-6	Experimental Bioconcentrati on		Log of Octanol/H2O part. coeff	2.36	Other methods
Toluene	108-88-3	Experimental Bioconcentrati on		Log of Octanol/H2O part. coeff	2.73	Other methods
Butane	106-97-8	Experimental Bioconcentrati on		Log of Octanol/H2O part. coeff	2.89	Other methods
Hydrogenated Styrene- Butadiene Polymer	66070-58-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Naphtha (Petroleum), Light Steam- Cracked, Debenzenized, Polymers, Hydrogenated	64742-89-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Octamethylcycl otetrasiloxane	556-67-2	Experimental BCF - Fathead Mi	28 days	Bioaccumulatio n Factor	12400	Other methods
Clay	68953-58-2	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

MaterialCAS No.Ozone Depletion PotentialGlobal Warming Potential
--

acetone 67-64-1 0

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:UN1950 Proper Shipping Name:AEROSOLS, FLAMMABLE Technical Name:None assigned. Hazard Class/Division:2.1 Subsidiary Risk:None assigned. Packing Group:None assigned. Limited Quantity:Yes Marine Pollutant: None assigned. Marine Pollutant Technical Name: None assigned. Other Dangerous Goods Descriptions: None assigned.

Air Transport (IATA)

UN Number:UN1950 Proper Shipping Name:AEROSOLS, FLAMMABLE Technical Name:None assigned. Hazard Class/Division:2.1 Subsidiary Risk:None assigned. Packing Group:None assigned. 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. 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 Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

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