



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(TM) Super 77(TM) Multipurpose Adhesive (Aerosol)

Product Identification Numbers

62-4977-4830-1	70-0050-1808-3	70-0050-8170-1	70-0050-8171-9	70-0050-8855-7
70-0050-8856-5	70-0050-9184-1	70-0051-0557-5	70-0051-1098-9	70-0051-2143-2
70-0051-2688-6	70-0052-9181-3	70-0068-5097-1	70-0068-5443-7	70-0070-0613-6
70-0714-8197-5				

1.2. Recommended use and restrictions on use

Recommended use

Adhesive

For Industrial or Consumer Use

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 Aerosol: Category 1.
Gas Under Pressure: Liquefied gas.
Skin Corrosion/Irritation: Category 2.
Serious Eye Damage/Irritation: Category 2.
Reproductive Toxicity: Category 1B.
Specific Target Organ Toxicity (single exposure): Category 1.
Chronic Aquatic Toxicity: Category 4.

2.2. Label elements

Signal word

Danger

Symbols

Flame | Gas cylinder | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements:

H222	Extremely flammable aerosol.
H280	Contains gas under pressure; may explode if heated.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
H370	Causes damage to organs: cardiovascular system.
H413	May cause long lasting harmful effects to aquatic life.

Precautionary statements

General:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

Prevention:

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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.

Response:

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Storage:

P405	Store locked up.
P410 + P403	Protect from sunlight. Store in a well-ventilated place.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50C/122F.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.
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2.3. Other hazards

Aspiration classification does not apply as this product is sold in sealed, self-pressurized containers with nozzles designed to prevent formation of a stream during usage., May cause drowsiness or dizziness., May displace oxygen and cause rapid suffocation.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
ACETONE	67-64-1	20 - 30
NON-VOLATILE COMPONENTS (N.J.T.S. Registry No. 04499600-6433P)	Trade Secret	20 - 30
PROPANE	74-98-6	15 - 25
CYCLCOHEXANE	110-82-7	5 - 20
PETROLEUM DISTILLATES	64742-49-0	10 - 20
TOLUENE	108-88-3	<= 0.5

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

Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details.

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**Substance**

Aldehydes

Carbon monoxide

Condition

During Combustion

During Combustion

Carbon dioxide

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.

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. 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 use in a confined area with minimal air exchange. 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.

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. 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
TOLUENE	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin, Ototoxicant

3M(TM) Super 77(TM) Multipurpose Adhesive (Aerosol)

TOLUENE	108-88-3	Malaysia OELs	TWA(8 hours):188 mg/m3(50 ppm)	SKIN
CYCLCOHEXANE	110-82-7	ACGIH	TWA:100 ppm	
CYCLCOHEXANE	110-82-7	Malaysia OELs	TWA(8 hours):1030 mg/m3(300 ppm)	
Naphtha	64742-49-0	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

Do not remain in area where available oxygen may be reduced. 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:

Full Face Shield

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polyvinyl Alcohol (PVA)

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 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:	Aerosol
Color	Colorless
Odor	Sweet Odor, Fruity Odor
Odor threshold	No Data Available
pH	Not Applicable
Melting point/Freezing point	Not Applicable
Boiling point/Initial boiling point/Boiling range	Not Applicable
Flash Point	-41.1 °C [Test Method: Tagliabue Closed Cup] [Details: CONDITIONS: Propellant]
Evaporation rate	1.9 [Ref Std: ETHER=1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	[Details: CONDITIONS: Compressed gas] No Data Available
Vapor Density and/or Relative Vapor Density	2.97 [Ref Std: AIR=1]
Density	0.726 g/ml
Relative Density	0.726 [Ref Std: WATER=1]
Water solubility	Negligible
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	Not Applicable
Volatile Organic Compounds	Approximately 51 % [Test Method: calculated SCAQMD rule 443.1]
Percent volatile	75 % weight
VOC Less H ₂ O & Exempt Solvents	468 g/l

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
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:

Simple Asphyxiation: Signs/symptoms may include increased heart rate, rapid respirations, drowsiness, headache, incoordination, altered judgement, nausea, vomiting, lethargy, seizures, coma, and may be fatal.

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.

Single exposure, above recommended guidelines, may cause: Cardiac Sensitization: Signs/symptoms may include irregular heartbeat (arrhythmia), faintness, chest pain, and may be fatal.

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.

3M(TM) Super 77(TM) Multipurpose Adhesive (Aerosol)**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 >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
PROPANE	Inhalation-Gas (4 hours)	Rat	LC50 > 200,000 ppm
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
PETROLEUM DISTILLATES	Dermal	Rabbit	LD50 > 2,920 mg/kg
PETROLEUM DISTILLATES	Inhalation-Vapor (4 hours)	Rat	LC50 > 23.3 mg/l
PETROLEUM DISTILLATES	Ingestion	Rat	LD50 > 5,840 mg/kg
CYCLCOHEXANE	Dermal	Rat	LD50 > 2,000 mg/kg
CYCLCOHEXANE	Inhalation-Vapor (4 hours)	Rat	LC50 > 32.9 mg/l
CYCLCOHEXANE	Ingestion	Rat	LD50 6,200 mg/kg
NON-VOLATILE COMPONENTS (N.J.T.S. Registry No. 04499600-6433P)	Dermal		LD50 estimated to be > 5,000 mg/kg
NON-VOLATILE COMPONENTS (N.J.T.S. Registry No. 04499600-6433P)	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
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

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
PROPANE	Rabbit	Minimal irritation
ACETONE	Mouse	Minimal irritation
PETROLEUM DISTILLATES	Rabbit	Irritant
CYCLCOHEXANE	Rabbit	Mild irritant
NON-VOLATILE COMPONENTS (N.J.T.S. Registry No. 04499600-6433P)	Professional judgement	Minimal irritation
TOLUENE	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
PROPANE	Rabbit	Mild irritant
ACETONE	Rabbit	Severe irritant
PETROLEUM DISTILLATES	Rabbit	Mild irritant
CYCLCOHEXANE	Rabbit	Mild irritant
TOLUENE	Rabbit	Moderate irritant

Sensitization:**Skin Sensitization**

Name	Species	Value
PETROLEUM DISTILLATES	Guinea	Not classified

3M(TM) Super 77(TM) Multipurpose Adhesive (Aerosol)

	pig	
TOLUENE	Guinea pig	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
PROPANE	In Vitro	Not mutagenic
ACETONE	In vivo	Not mutagenic
ACETONE	In Vitro	Some positive data exist, but the data are not sufficient for classification
PETROLEUM DISTILLATES	In Vitro	Not mutagenic
CYCLCOHEXANE	In Vitro	Not mutagenic
CYCLCOHEXANE	In vivo	Some positive data exist, but the data are not sufficient for classification
TOLUENE	In Vitro	Not mutagenic
TOLUENE	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
ACETONE	Not Specified	Multiple animal species	Not carcinogenic
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

Reproductive Toxicity**Reproductive and/or Developmental Effects**

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
PETROLEUM DISTILLATES	Not Specified	Not classified for female reproduction	Rat	NOAEL Not available	2 generation
PETROLEUM DISTILLATES	Not Specified	Not classified for male reproduction	Rat	NOAEL Not available	2 generation
PETROLEUM DISTILLATES	Not Specified	Not classified for development	Rat	NOAEL Not available	2 generation
CYCLCOHEXANE	Inhalation	Not classified for female reproduction	Rat	NOAEL 24 mg/l	2 generation
CYCLCOHEXANE	Inhalation	Not classified for male reproduction	Rat	NOAEL 24 mg/l	2 generation
CYCLCOHEXANE	Inhalation	Not classified for development	Rat	NOAEL 6.9 mg/l	2 generation
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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
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	
ACETONE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ACETONE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	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
PETROLEUM DISTILLATES	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
CYCLCOHEXANE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
CYCLCOHEXANE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
CYCLCOHEXANE	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	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

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	14 days

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					3,896 mg/kg/day	
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
CYCLCOHEXANE	Inhalation	liver	Not classified	Rat	NOAEL 24 mg/l	90 days
CYCLCOHEXANE	Inhalation	auditory system	Not classified	Rat	NOAEL 1.7 mg/l	90 days
CYCLCOHEXANE	Inhalation	kidney and/or bladder	Not classified	Rabbit	NOAEL 2.7 mg/l	10 weeks
CYCLCOHEXANE	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 24 mg/l	14 weeks
CYCLCOHEXANE	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 8.6 mg/l	30 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 through 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 species	NOAEL 11.3 mg/l	15 weeks
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

Aspiration Hazard

Name	Value
PETROLEUM DISTILLATES	Aspiration hazard
CYCLCOHEXANE	Aspiration hazard
TOLUENE	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:

GHS Chronic 4: May cause long lasting harmful effects to aquatic organisms

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
ACETONE	67-64-1	Algae other	Experimental	96 hours	EC50	11,493 mg/l
ACETONE	67-64-1	Crustacea other	Experimental	24 hours	LC50	2,100 mg/l
ACETONE	67-64-1	Rainbow Trout	Experimental	96 hours	LC50	5,540 mg/l
ACETONE	67-64-1	Water flea	Experimental	21 days	NOEC	1,000 mg/l
ACETONE	67-64-1	Bacteria	Experimental	16 hours	NOEC	1,700 mg/l
ACETONE	67-64-1	Redworm	Experimental	48 hours	LC50	>100
NON-VOLATILE COMPONENTS (N.J.T.S. Registry No. 04499600-6433P)	Trade Secret		Data not available or insufficient for classification			N/A
PROPANE	74-98-6		Data not available or insufficient for classification			N/A
CYCLCOHEXANE	110-82-7	Bacteria	Experimental	24 hours	IC50	97 mg/l
CYCLCOHEXANE	110-82-7	Fathead Minnow	Experimental	96 hours	LC50	4.53 mg/l
CYCLCOHEXANE	110-82-7	Water flea	Experimental	48 hours	EC50	0.9 mg/l
PETROLEUM DISTILLATES	64742-49-0	Green Algae	Estimated	72 hours	EL50	29 mg/l
PETROLEUM DISTILLATES	64742-49-0	Rainbow Trout	Estimated	96 hours	LL50	>13.4 mg/l
PETROLEUM DISTILLATES	64742-49-0	Water flea	Estimated	48 hours	EL50	3 mg/l
PETROLEUM DISTILLATES	64742-49-0	Green Algae	Estimated	72 hours	NOEL	6.3 mg/l

3M(TM) Super 77(TM) Multipurpose Adhesive (Aerosol)

PETROLEUM DISTILLATES	64742-49-0	Water flea	Estimated	21 days	NOEL	1 mg/l
TOLUENE	108-88-3	Coho Salmon	Experimental	96 hours	LC50	5.5 mg/l
TOLUENE	108-88-3	Grass Shrimp	Experimental	96 hours	LC50	9.5 mg/l
TOLUENE	108-88-3	Green Algae	Experimental	72 hours	EC50	12.5 mg/l
TOLUENE	108-88-3	Leopard frog	Experimental	9 days	LC50	0.39 mg/l
TOLUENE	108-88-3	Pink Salmon	Experimental	96 hours	LC50	6.41 mg/l
TOLUENE	108-88-3	Water flea	Experimental	48 hours	EC50	3.78 mg/l
TOLUENE	108-88-3	Coho Salmon	Experimental	40 days	NOEC	1.39 mg/l
TOLUENE	108-88-3	Diatom	Experimental	72 hours	NOEC	10 mg/l
TOLUENE	108-88-3	Water flea	Experimental	7 days	NOEC	0.74 mg/l
TOLUENE	108-88-3	Activated sludge	Experimental	12 hours	IC50	292 mg/l
TOLUENE	108-88-3	Bacteria	Experimental	16 hours	NOEC	29 mg/l
TOLUENE	108-88-3	Bacteria	Experimental	24 hours	EC50	84 mg/l
TOLUENE	108-88-3	Redworm	Experimental	28 days	LC50	>150 mg per kg of bodyweight
TOLUENE	108-88-3	Soil microbes	Experimental	28 days	NOEC	<26 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
ACETONE	67-64-1	Experimental Photolysis		Photolytic half-life (in air)	147 days (t 1/2)	
ACETONE	67-64-1	Experimental Biodegradation	28 days	Biological Oxygen Demand	78 % BOD/ThBOD	OECD 301D - Closed Bottle Test
NON-VOLATILE COMPONENTS (N.J.T.S. Registry No. 04499600-6433P)	Trade Secret	Data not available - insufficient			N/A	
PROPANE	74-98-6	Experimental Photolysis		Photolytic half-life (in air)	27.5 days (t 1/2)	Non-standard method
CYCLCOHEXANE	110-82-7	Experimental Photolysis		Photolytic half-life (in air)	4.14 days (t 1/2)	Non-standard method
CYCLCOHEXANE	110-82-7	Experimental Biodegradation	28 days	Biological Oxygen Demand	77 % BOD/ThBOD	OECD 301F - Manometric Respiro
PETROLEUM DISTILLATES	64742-49-0	Estimated Biodegradation	28 days	Biological Oxygen Demand	98 %BOD/CO D	OECD 301F - Manometric Respiro
TOLUENE	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	
TOLUENE	108-88-3	Experimental Biodegradation	20 days	Biological Oxygen Demand	80 % BOD/ThBOD	APHA Std Meth Water/Wastewater

12.3. Bioaccumulative potential

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
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3M(TM) Super 77(TM) Multipurpose Adhesive (Aerosol)

ACETONE	67-64-1	Experimental BCF - Other		Bioaccumulation Factor	0.65	
ACETONE	67-64-1	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	-0.24	
NON-VOLATILE COMPONENTS (N.J.T.S. Registry No. 04499600-6433P)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
PROPANE	74-98-6	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	2.36	Non-standard method
CYCLCOHEXANE	110-82-7	Experimental BCF-Carp	56 days	Bioaccumulation Factor	129	OECD 305E-Bioaccum FI-thru fis
PETROLEUM DISTILLATES	64742-49-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
TOLUENE	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulation Factor	90	
TOLUENE	108-88-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	2.73	

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: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 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