

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) Safety-Walk(TM) Edging Compound

 Product Identification
 Numbers

 62-5569-2660-8
 XT-0006-3136-3
 XX-1000-2054-2

1.2. Recommended use and restrictions on use

Recommended use

Edging Compound, Industrial 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
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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. Skin Corrosion/Irritation: Category 2. Serious Eye Damage/Irritation: Category 2. Reproductive Toxicity: Category 1B. Specific Target Organ Toxicity (repeated exposure): Category 1. Chronic Aquatic Toxicity: Category 2.

2.2. Label elements Signal word Danger

Symbols

Flame |Exclamation mark |Health Hazard |Environment |

Pictograms



Hazard Statements: H225	Highly flammable liquid and vapor.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure: nervous system sensory organs.
H411	Toxic to aquatic life with long lasting effects.
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.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P273	Avoid release to the environment.
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.
P308 + P313	IF exposed or concerned: 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.

Disposal:P501Dispose of contents/container in accordance with applicable
local/regional/national/international regulations.

2.3. Other hazards

Aspiration classification does not apply due to the viscosity of the product., May cause drowsiness or dizziness.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Hydrotreated light naphtha (petroleum)	64742-49-0	40 - 50
Poly(butyl methacrylate)	9003-63-8	40 - 50
Toluene	108-88-3	7 - 13
Nonane	111-84-2	< 10
Methyl Isobutyl Ketone	108-10-1	0.1 - 0.5

Cyclohexane	110-82-7	< 0.25
Methylene Chloride	75-09-2	< 0.001

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:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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 following prolonged or repeated exposure. See Section 11 for additional details.

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

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ketones	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.

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. Avoid release to the environment. 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 container tightly closed. Keep cool. Protect from sunlight. Store away from heat. 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
Methyl Isobutyl Ketone	108-10-1	ACGIH	TWA:20 ppm;STEL:75 ppm	A3: Confirmed animal
				carcin.
Methyl Isobutyl Ketone	108-10-1	Malaysia OELs	TWA(8 hours):205 mg/m3(50	
			ppm)	
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)	
Cyclohexane	110-82-7	ACGIH	TWA:100 ppm	
Cyclohexane	110-82-7	Malaysia OELs	TWA(8 hours):1030	
			mg/m3(300 ppm)	
Nonane	111-84-2	ACGIH	TWA:200 ppm	
Nonane, all isomers	111-84-2	Malaysia OELs	TWA(8 hours):1050	
		-	mg/m3(200 ppm)	

64742-49-0	Malaysia OELs	TWA(8 hours):1590	
	-	mg/m3(400 ppm)	
75-09-2	ACGIH	TWA:50 ppm	A3: Confirmed animal
			carcin.
75-09-2	Malaysia OELs	TWA(8 hours):50 ppm	
	75-09-2	75-09-2 ACGIH	75-09-2 ACGIH TWA:50 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. 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: 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

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	
Color		
Odor	Naphtha	
Odor threshold	No Data Available	
рН	No Data Available	
Melting point/Freezing point	No Data Available	
Boiling point/Initial boiling point/Boiling range 1111.1 °C [Details: CONDITIONS: (toluene)]		
Flash Point4.4 °C [Test Method:Closed Cup] [Details:MITS data]		
Evaporation rate	$\geq =2$ [<i>Ref Std</i> :ETHER=1]	

Flammability (solid, gas)	Not Applicable	
Flammable Limits(LEL)	1 % volume	
Flammable Limits(UEL)	7 % volume	
Vapor Pressure	<=2,933.1 Pa [@ 20 °C]	
Vapor Density and/or Relative Vapor Density	3 [Ref Std:AIR=1]	
Density	0.88 g/ml	
Relative Density	0.88 [<i>Ref Std</i> :WATER=1]	
Water solubility	Nil	
Solubility- non-water	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	3,200 - 3,800 mPa-s	
Volatile Organic Compounds	<=55.5 % [<i>Test Method</i> :calculated per CARB]	
Percent volatile 56.8 % weight		
VOC Less H2O & Exempt Solvents 410 g/l [Test Method:tested per EPA method 24]		
Molecular weight	No Data Available	

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 Strong oxidizing agents

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:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy 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.

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.

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	Inhalation-		No data available; calculated ATE >50 mg/l
	Vapor(4 hr)		
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Poly(butyl methacrylate)	Dermal		LD50 estimated to be > 5,000 mg/kg
Poly(butyl methacrylate)	Ingestion		LD50 estimated to be > 5,000 mg/kg

Hydrotreated light naphtha (petroleum)	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrotreated light naphtha (petroleum)	Inhalation-	Rat	LC50 > 14.7 mg/l
	Vapor (4		
	hours)		
Hydrotreated light naphtha (petroleum)	Ingestion	Rat	LD50 > 5,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-	Rat	LC50 30 mg/l
	Vapor (4		-
	hours)		
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Methyl Isobutyl Ketone	Dermal	Rabbit	LD50 > 16,000 mg/kg
Methyl Isobutyl Ketone	Inhalation-	Rat	LC50 >8.2,<16.4 mg/l
	Vapor (4		
	hours)		
Methyl Isobutyl Ketone	Ingestion	Rat	LD50 3,038 mg/kg
Cyclohexane	Dermal	Rat	LD50 > 2,000 mg/kg
Cyclohexane	Inhalation-	Rat	LC50 > 32.9 mg/l
	Vapor (4		-
	hours)		
Cyclohexane	Ingestion	Rat	LD50 6,200 mg/kg
Methylene Chloride	Dermal	Rat	LD50 > 2,000 mg/kg
Methylene Chloride	Inhalation-	Rat	LC50 63.7 mg/l
-	Vapor (4	1	-
	hours)		
Methylene Chloride	Ingestion	Rat	LD50 1,410 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Poly(butyl methacrylate)	Not	No significant irritation
	available	
Hydrotreated light naphtha (petroleum)	Rabbit	Irritant
Toluene	Rabbit	Irritant
Methyl Isobutyl Ketone	Rabbit	Mild irritant
Cyclohexane	Rabbit	Mild irritant
Methylene Chloride	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Poly(butyl methacrylate)	Not	No significant irritation
	available	
Hydrotreated light naphtha (petroleum)	Rabbit	Mild irritant
Toluene	Rabbit	Moderate irritant
Methyl Isobutyl Ketone	Rabbit	Mild irritant
Cyclohexane	Rabbit	Mild irritant
Methylene Chloride	Rabbit	Severe irritant

Sensitization:

Skin Sensitization

Name	Species	Value
Hydrotreated light naphtha (petroleum)	Guinea	Not classified
	pig	
Toluene	Guinea	Not classified
	pig	
Methyl Isobutyl Ketone	Guinea	Not classified
	pig	

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
Hydrotreated light naphtha (petroleum)	In Vitro	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Methyl Isobutyl Ketone	In Vitro	Not mutagenic
Cyclohexane	In Vitro	Not mutagenic
Cyclohexane	In vivo	Some positive data exist, but the data are not sufficient for classification
Methylene Chloride	In vivo	Not mutagenic
Methylene Chloride	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Hydrotreated light naphtha (petroleum)	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
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
Methyl Isobutyl Ketone	Inhalation	Multiple animal species	Carcinogenic
Methylene Chloride	Inhalation	Multiple animal species	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration	
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	
Methyl Isobutyl Ketone	Inhalation	Not classified for female reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation	
Methyl Isobutyl Ketone	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	13 weeks	
Methyl Isobutyl Ketone	Inhalation	Not classified for male reproduction	Multiple animal species	NOAEL 8.2 mg/l	2 generation	
Methyl Isobutyl Ketone	Inhalation	Not classified for development	Mouse	NOAEL 12.3 mg/l	during organogenesis	
Cyclohexane	Inhalation	Not classified for female reproduction	Rat	NOAEL 24 mg/l	2 generation	
Cyclohexane	Inhalation	Not classified for male reproduction	Rat	NOAEL 24 mg/l	2 generation	
Cyclohexane	Inhalation	Not classified for development	Rat	NOAEL 6.9 mg/l	2 generation	
Methylene Chloride	Inhalation	Not classified for female reproduction	Rat	NOAEL 5.2 mg/l	2 generation	
Methylene Chloride	Inhalation	Not classified for male reproduction	Rat	NOAEL 5.2	2 generation	

				mg/l	
Methylene Chloride	Inhalation	Not classified for development	Multiple animal species	NOAEL 4.3 mg/l	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Poly(butyl methacrylate)	Inhalation	respiratory irritation	Not classified		NOAEL Not available	
Hydrotreated light naphtha (petroleum)	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Hydrotreated light naphtha (petroleum)	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Hydrotreated light naphtha (petroleum)	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	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
Methyl Isobutyl Ketone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	LOAEL 0.1 mg/l	2 hours
Methyl Isobutyl Ketone	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL 0.9 mg/l	7 minutes
Methyl Isobutyl Ketone	Inhalation	vascular system	Not classified	Dog	NOAEL Not available	not available
Methyl Isobutyl Ketone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Rat	LOAEL 900 mg/kg	not applicable
Cyclohexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Cyclohexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
Methylene Chloride	Dermal	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	4 hours
Methylene Chloride	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	occupational exposure
Methylene Chloride	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Methylene Chloride	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Toluene	Inhalation	auditory system eyes olfactory	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse

		system			ļ	ļ
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 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
Methyl Isobutyl Ketone	Inhalation	liver	Not classified	Rat	NOAEL 0.41 mg/l	13 weeks
Methyl Isobutyl Ketone	Inhalation	heart	Not classified	Multiple animal species	NOAEL 0.8 mg/l	2 weeks
Methyl Isobutyl Ketone	Inhalation	kidney and/or bladder	Not classified	Multiple animal species	NOAEL 0.4 mg/l	90 days
Methyl Isobutyl Ketone	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 4.1 mg/l	14 weeks
Methyl Isobutyl Ketone	Inhalation	endocrine system hematopoietic system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	90 days
Methyl Isobutyl Ketone	Inhalation	nervous system	Not classified	Multiple animal species	NOAEL 0.41 mg/l	13 weeks
Methyl Isobutyl Ketone	Ingestion	endocrine system hematopoietic system liver kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Methyl Isobutyl Ketone	Ingestion	heart immune system muscles nervous system respiratory system	Not classified	Rat	NOAEL 1,040 mg/kg/day	120 days
Cyclohexane	Inhalation	liver	Not classified	Rat	NOAEL 24 mg/l	90 days
Cyclohexane	Inhalation	auditory system	Not classified	Rat	NOAEL 1.7 mg/l	90 days
Cyclohexane	Inhalation	kidney and/or bladder	Not classified	Rabbit	NOAEL 2.7 mg/l	10 weeks

Cyclohexane	Inhalation	hematopoietic system	Not classified	Mouse	NOAEL 24 mg/l	14 weeks
Cyclohexane	Inhalation	peripheral nervous system	Not classified	Rat	NOAEL 8.6 mg/l	30 weeks
Methylene Chloride	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification		LOAEL 6.95 mg/l	2 years
Methylene Chloride	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.17 mg/l	2 years
Methylene Chloride	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 35 mg/l	8 weeks
Methylene Chloride	Inhalation	heart	Not classified	Human	NOAEL Not available	
Methylene Chloride	Inhalation	immune system	Not classified	Rat	NOAEL 18 mg/l	28 days
Methylene Chloride	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1,200 mg/kg/day	3 months
Methylene Chloride	Ingestion	blood	Not classified	Rat	NOAEL 249 mg/kg/day	2 years
Methylene Chloride	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,469 mg/kg/day	3 months
Methylene Chloride	Ingestion	eyes	Not classified	Rat	NOAEL 249 mg/kg/day	104 weeks

Aspiration Hazard

Name	Value
Hydrotreated light naphtha (petroleum)	Aspiration hazard
Toluene	Aspiration hazard
Methyl Isobutyl Ketone	Some positive data exist, but the data are not sufficient for
	classification
Cyclohexane	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 2: Toxic to aquatic life with long lasting effects

No product test data available

Material	Cas #	Organism	Туре	Exposure	Test Endpoint	Test Result
Hydrotreated	64742-49-0	Fathead	Estimated	96 hours	LL50	8.2 mg/l
light naphtha		Minnow				
(petroleum)						

3M(TM) Safety-Walk(TM) Edging Compound

Hydrotreated	64742-49-0	Green Algae	Estimated	72 hours	EL50	3.1 mg/l
light naphtha		0				
(petroleum)						
Hydrotreated	64742-49-0	Water flea	Estimated	48 hours	EL50	4.5 mg/l
light naphtha						
(petroleum)						
Hydrotreated	64742-49-0	Green Algae	Estimated	72 hours	NOEL	0.5 mg/l
light naphtha						
(petroleum)						
Hydrotreated	64742-49-0	Water flea	Estimated	21 days	NOEL	2.6 mg/l
light naphtha				-		
(petroleum)						
Poly(butyl	9003-63-8		Data not			NA
methacrylate)			available or			
			insufficient for			
			classification			
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	Experimental	12 hours	IC50	292 mg/l
1010010		sludge	2 p • •	12 110 010	1000	
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)
Nonane	111-84-2	Water flea	Experimental	48 hours	EC50	0.2 mg/l
Methyl	108-10-1	Activated	Experimental	30 minutes	EC50	>1,000 mg/l
Isobutyl		sludge				
Ketone						
Methyl	108-10-1	Fathead	Experimental	96 hours	LC50	505 mg/l
Isobutyl		Minnow				
Ketone				0.6.1		400 /1
Methyl	108-10-1	Green Algae	Experimental	96 hours	EC50	400 mg/l
Isobutyl Katana						
Ketone	100 10 1	Watan G.	E-manine	40 h arr		170 m c/l
Methyl	108-10-1	Water flea	Experimental	48 hours	EC50	170 mg/l
Isobutyl Katana						
Ketone Mothyl	108-10-1	Fathead	Experimental	32 days	NOEC	57 mg/l
Methyl Isobutyl	100-10-1	Minnow	Experimental	32 uays	NUEC	5/ mg/1
		[^{winniow}				
Ketone Mothyl	108-10-1	Water flee	Exporimontol	21 days	NOEC	78 mg/l
Methyl Isobutyl	108-10-1	Water flea	Experimental	21 days	NUEC	/ 8 IIIg/1
Isobutyl Ketone						
	110-82-7	Bacteria	Experimental	24 hours	IC50	97 mg/l
Cyclohexane			Experimental			
Cyclohexane	110-82-7	Fathead	Experimental	96 hours	LC50	4.53 mg/l

		Minnow				
Cyclohexane	110-82-7	Water flea	Experimental	48 hours	EC50	0.9 mg/l
Methylene Chloride	75-09-2	Fathead Minnow	Experimental	96 hours	LC50	193 mg/l
Methylene Chloride	75-09-2	Green Algae	Experimental	72 hours	EC50	242 mg/l
Methylene Chloride	75-09-2	Water flea	Experimental	48 hours	LC50	27 mg/l
Methylene Chloride	75-09-2	Fathead Minnow	Experimental	28 days	NOEC	83 mg/l
Methylene Chloride	75-09-2	Green Algae	Experimental	72 hours	EC10	115 mg/l
Methylene Chloride	75-09-2	Activated sludge	Experimental	40 minutes	EC50	2,590 mg/l

12.2. Persistence and degradability

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Hydrotreated	64742-49-0	Estimated	28 days	Biological	77 %	OECD 301F -
light naphtha (petroleum)		Biodegradation		Oxygen Demand	BOD/ThBOD	Manometric Respiro
Poly(butyl methacrylate)	9003-63-8	Data not availbl- insufficient			NA	
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
Nonane	111-84-2	Experimental Photolysis		Photolytic half- life (in air)	3.07 days (t 1/2)	Non-standard method
Nonane	111-84-2	Experimental Biodegradation	28 days	Biological Oxygen Demand	96 % weight	Non-standard method
Methyl Isobutyl Ketone	108-10-1	Experimental Photolysis		Photolytic half- life (in air)	2.28 days (t 1/2)	Non-standard method
Methyl Isobutyl Ketone	108-10-1	Experimental Biodegradation	14 days	Biological Oxygen Demand	84 % weight	OECD 301C - MITI (I)
Cyclohexane	110-82-7	Experimental Photolysis		Photolytic half- life (in air)	4.14 days (t 1/2)	Non-standard method
Cyclohexane	110-82-7	Experimental Biodegradation	28 days	Biological Oxygen Demand	77 % BOD/ThBOD	OECD 301F - Manometric Respiro
Methylene Chloride	75-09-2	Experimental Photolysis		Photolytic half- life (in air)	226 days (t 1/2)	
Methylene Chloride	75-09-2	Experimental Biodegradation	28 days	Biological Oxygen Demand	68 % BOD/ThBOD	OECD 301D - Closed Bottle Test

12.3. Bioaccumulative potential

Material CAS No. Test Type Duration Study Type Test Result Protocol

Hydrotreated light naphtha (petroleum)	64742-49-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly(butyl methacrylate)	9003-63-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental BCF - Other	72 hours	Bioaccumulatio n Factor	90	
Toluene	108-88-3	Experimental Bioconcentrati on		Log of Octanol/H2O part. coeff	2.73	
Nonane	111-84-2	Experimental Bioconcentrati on		Log of Octanol/H2O part. coeff	5.65	Non-standard method
Methyl Isobutyl Ketone	108-10-1	Experimental Bioconcentrati on		Log of Octanol/H2O part. coeff	1.31	Non-standard method
Cyclohexane	110-82-7	Experimental BCF-Carp	56 days	Bioaccumulatio n Factor	129	OECD 305E-Bioaccum Fl-thru fis
Methylene Chloride	75-09-2	Experimental BCF-Carp	42 days	Bioaccumulatio n Factor	≤40	OECD305- Bioconcentration
Methylene Chloride	75-09-2	Experimental Bioconcentrati on		Log of Octanol/H2O part. coeff	1.25	

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other adverse effects

Material	CAS No.	Ozone Depletion Potential	Global Warming Potential
methyl isobutyl ketone	108-10-1	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:UN1866 Proper Shipping Name:RESIN SOLUTION 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:UN1866 Proper Shipping Name:RESIN SOLUTION 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

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. 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 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 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