



## 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™ Windo-Weld™ Super Fast Urethane, PN 08609

#### Product Identification Numbers

60-9800-3692-9

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Adhesive, Adhesive/Sealant for Windshields

#### 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

Serious Eye Damage/Irritation: Category 2.

Skin Corrosion/Irritation: Category 2.

Reproductive Toxicity: Category 1B.

Carcinogenicity: Category 2.

Specific Target Organ Toxicity (repeated exposure): Category 1.

Specific Target Organ Toxicity (repeated exposure): Category 2.

Chronic Aquatic Toxicity: Category 3.

#### 2.2. Label elements

##### Signal word

Danger

### Symbols

Exclamation mark | Health Hazard |

### Pictograms



### Hazard Statements

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H360	May damage fertility or the unborn child.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure: respiratory system
H373	May cause damage to organs through prolonged or repeated exposure: nervous system   sensory organs
H412	Harmful to aquatic life with long lasting effects.

### Precautionary statements

#### General:

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

#### Prevention:

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280B	Wear protective gloves and eye/face protection.
P281	Use personal protective equipment as required.

#### Response:

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

#### Storage:

P405	Store locked up.
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#### Disposal:

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

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

## SECTION 3: Composition/information on ingredients

## 3M™ Windo-Weld™ Super Fast Urethane, PN 08609

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
Urethane Polymer	68130-40-5	30 - 60
Carbon Black	1333-86-4	10 - 30
Sulfonic Acids, C10-18-Alkane, Ph Esters	70775-94-9	10 - 30
Kaolin, Calcined	92704-41-1	10 - 20
Hydrotreated Light Petroleum Distillates	64742-47-8	1 - 5
Toluene	108-88-3	1 - 5
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	0.1 - 1
DIBUTYLTIN DICHLORIDE	683-18-1	< 0.1

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### **Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

#### **Skin Contact:**

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

#### **Eye Contact:**

Immediately flush with large amounts of water. 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

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Suitable extinguishing media

DO NOT USE WATER

### 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

### Hazardous Decomposition or By-Products

#### Substance

Carbon monoxide

Carbon dioxide

#### Condition

During Combustion

During Combustion

### 5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Vacuum or sweep up. **WARNING !** A motor could be an ignition source and cause flammable gases or vapors or dust in the spill area to burn or explode. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Clean up residue. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

For industrial/occupational use only. Not for consumer sale or use. Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard. Use personal protective equipment (gloves, respirators, etc.) as required.

**7.2. Conditions for safe storage including any incompatibilities**

Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents. Store away from amines.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional Comments</b>
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	ACGIH	TWA:0.005 ppm	
P,P'-Methylenebis(phenyl isocyanate)	101-68-8	Malaysia OELs	TWA(8 hours):0.051 mg/m3(0.005 ppm)	
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Toluene	108-88-3	Malaysia OELs	TWA(8 hours):188 mg/m3(50 ppm)	SKIN
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	Malaysia OELs	TWA(8 hours):3.5 mg/m3	
Kerosine (petroleum)	64742-47-8	ACGIH	TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3	A3: Confirmed animal carcin., SKIN

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TIN, ORGANIC COMPOUNDS	683-18-1	ACGIH	TWA(as Sn):0.1 mg/m <sup>3</sup> ;STEL(as Sn):0.2 mg/m <sup>3</sup>	A4: Not class. as human carcin, Danger of cutaneous absorption
TIN, ORGANIC COMPOUNDS	683-18-1	Malaysia OELs	TWA(as Sn)(8 hours):0.1 mg/m <sup>3</sup>	SKIN

ACGIH : American Conference of Governmental Industrial Hygienists

CMRG : Chemical Manufacturer's Recommended Guidelines

Malaysia OELs : Malaysia. Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CELL: Ceiling

**8.2. Exposure controls****8.2.1. Engineering controls**

Provide ventilated enclosure for curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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: Nitrile Rubber

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Nitrile

**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**

<b>Physical state</b>	Solid
<b>Specific Physical Form:</b>	Paste
<b>Color</b>	Black

<b>Odor</b>	Neutral
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	<i>Not Applicable</i>
<b>Melting point/Freezing point</b>	<i>No Data Available</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	110 °C
<b>Flash Point</b>	No flash point
<b>Evaporation rate</b>	<i>No Data Available</i>
<b>Flammability (solid, gas)</b>	Not Classified
<b>Flammable Limits(LEL)</b>	1.2 % volume
<b>Flammable Limits(UEL)</b>	7.1 % volume
<b>Vapor Pressure</b>	2,900 Pa [ <i>Ref Std: AIR=1</i> ]
<b>Vapor Density and/or Relative Vapor Density</b>	3.14 [ <i>Ref Std: AIR=1</i> ]
<b>Density</b>	1.205 g/cm <sup>3</sup>
<b>Relative Density</b>	1.2 [ <i>Ref Std: WATER=1</i> ]
<b>Water solubility</b>	Negligible
<b>Solubility- non-water</b>	<i>No Data Available</i>
<b>Partition coefficient: n-octanol/ water</b>	<i>No Data Available</i>
<b>Autoignition temperature</b>	450 °C
<b>Decomposition temperature</b>	<i>No Data Available</i>
<b>Viscosity/Kinematic Viscosity</b>	<i>No Data Available</i>
<b>Volatile Organic Compounds</b>	70 g/l [ <i>Test Method: calculated SCAQMD rule 443.1</i> ]
<b>Percent volatile</b>	5.8 % weight
<b>VOC Less H<sub>2</sub>O &amp; Exempt Solvents</b>	70 g/l [ <i>Test Method: calculated SCAQMD rule 443.1</i> ]
<b>Molecular weight</b>	<i>No Data Available</i>

#### Nanoparticles

This material contains 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

High shear and high temperature conditions

Sparks and/or flames

Temperatures above the boiling point

### 10.5. Incompatible materials

Amines

Alcohols

Water

Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.

Accelerators

Al or Mg powder and high/shear temperature conditions

Alkali and alkaline earth metals

Reactive metals  
Reducing agents  
Strong acids  
Strong bases  
Strong oxidizing agents  
Combustibles  
Finely divided active metals  
Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.

#### 10.6. Hazardous decomposition products

**Substance**

**Condition**

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

##### **Inhalation:**

May be harmful if inhaled.

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

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

May cause additional health effects (see below).

##### **Skin Contact:**

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

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

##### **Eye Contact:**

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

##### **Ingestion:**

May be harmful if swallowed.

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

May cause additional health effects (see below).

#### **Additional Health Effects:**

**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.

**Additional Information:**

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Urethane Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Urethane Polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Sulfonic Acids, C10-18-Alkane, Ph Esters	Dermal	Rat	LD50 > 1,000 mg/kg
Sulfonic Acids, C10-18-Alkane, Ph Esters	Ingestion	Rat	LD50 > 5,000 mg/kg
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg
Kaolin, Calcined	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Kaolin, Calcined	Ingestion	Rat	LD50 > 2,000 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
Hydrotreated Light Petroleum Distillates	Dermal	Rabbit	LD50 > 3,160 mg/kg
Hydrotreated Light Petroleum Distillates	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 3 mg/l
Hydrotreated Light Petroleum Distillates	Ingestion	Rat	LD50 > 5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
P,P'-Methylenebis(phenyl isocyanate)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
P,P'-Methylenebis(phenyl isocyanate)	Ingestion	Rat	LD50 31,600 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Carbon Black	Rabbit	No significant irritation
Toluene	Rabbit	Irritant



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Hydrotreated Light Petroleum Distillates	Rabbit	Mild irritant
P,P'-Methylenebis(phenyl isocyanate)	official classification	Irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Carbon Black	Rabbit	No significant irritation
Toluene	Rabbit	Moderate irritant
Hydrotreated Light Petroleum Distillates	Rabbit	Mild irritant
P,P'-Methylenebis(phenyl isocyanate)	official classification	Severe irritant

**Sensitization:****Skin Sensitization**

Name	Species	Value
Toluene	Guinea pig	Not classified
Hydrotreated Light Petroleum Distillates	Guinea pig	Not classified
P,P'-Methylenebis(phenyl isocyanate)	official classification	Sensitizing

**Respiratory Sensitization**

Name	Species	Value
P,P'-Methylenebis(phenyl isocyanate)	Human	Sensitizing

**Germ Cell Mutagenicity**

Name	Route	Value
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not sufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Hydrotreated Light Petroleum Distillates	In Vitro	Not mutagenic
P,P'-Methylenebis(phenyl isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic
Carbon Black	Inhalation	Rat	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
Hydrotreated Light Petroleum Distillates	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Rat	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
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
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
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
Hydrotreated Light Petroleum Distillates	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
Hydrotreated Light Petroleum Distillates	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Hydrotreated Light Petroleum Distillates	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Carbon Black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
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	Not classified	Human	NOAEL Not available	occupational

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		system   vascular system			available	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
P,P'-Methylenebis(phenyl isocyanate)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks

**Aspiration Hazard**

Name	Value
Toluene	Aspiration hazard
Hydrotreated Light Petroleum Distillates	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 3: Harmful to aquatic life with long lasting effects

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
Urethane Polymer	68130-40-5		Data not available or insufficient for classification			
Carbon Black	1333-86-4		Data not available or insufficient for classification			
Sulfonic Acids,	70775-94-9	Water flea	Estimated	48 hours	Effect	>100 mg/l

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C10-18- Alkane, Ph Esters					Concentration 50%	
Sulfonic Acids, C10-18- Alkane, Ph Esters	70775-94-9	Zebra Fish	Estimated	96 hours	Lethal Concentration 50%	>100 mg/l
Sulfonic Acids, C10-18- Alkane, Ph Esters	70775-94-9	Green algae	Estimated	72 hours	Effect Concentration 0%	>100 mg/l
Kaolin, Calcined	92704-41-1	Green algae	Estimated	72 hours	Effect Concentration 50%	2,500 mg/l
Kaolin, Calcined	92704-41-1	Water flea	Estimated	48 hours	Effect Concentration 50%	>100 mg/l
Kaolin, Calcined	92704-41-1	Zebra Fish	Estimated	96 hours	Lethal Concentration 50%	>100 mg/l
Kaolin, Calcined	92704-41-1	Green algae	Estimated	72 hours	Effect Concentration 10%	41 mg/l
Kaolin, Calcined	92704-41-1	Rainbow Trout	Estimated	30 days	No obs Effect Conc	>100 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Green Algae	Estimated	72 hours	Effect Concentration 50%	1 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Rainbow Trout	Estimated	96 hours	Lethal Level 50%	2 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Water flea	Estimated	48 hours	Effect Level 50%	1.4 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Green Algae	Estimated	72 hours	No obs Effect Level	1 mg/l
Hydrotreated Light Petroleum Distillates	64742-47-8	Water flea	Estimated	21 days	No obs Effect Level	0.48 mg/l
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	3.78 mg/l

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					Concentration 50%	
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
P,P'-Methylenebis(p henyl isocyanate)	101-68-8	Green algae	Estimated	72 hours	Effect Concentration 50%	>1,640 mg/l
P,P'-Methylenebis(p henyl isocyanate)	101-68-8	Water flea	Estimated	24 hours	Effect Concentration 50%	>1,000 mg/l
P,P'-Methylenebis(p henyl isocyanate)	101-68-8	Zebra Fish	Estimated	96 hours	Lethal Concentration 50%	>1,000 mg/l
P,P'-Methylenebis(p henyl isocyanate)	101-68-8	Green algae	Estimated	72 hours	No obs Effect Conc	1,640 mg/l
P,P'-Methylenebis(p henyl isocyanate)	101-68-8	Water flea	Estimated	21 days	No obs Effect Conc	10 mg/l
DIBUTYLTIN DICHLORIDE	683-18-1	Algae	Experimental	96 hours	Effect Concentration 50%	0.043 mg/l
DIBUTYLTIN DICHLORIDE	683-18-1	Water flea	Experimental	48 hours	Effect Concentration 50%	0.84 mg/l
DIBUTYLTIN DICHLORIDE	683-18-1	Ricefish	Experimental	28 days	No obs Effect Conc	1.8 mg/l
DIBUTYLTIN DICHLORIDE	683-18-1	Water flea	Experimental	21 days	No obs Effect Conc	0.015 mg/l

**12.2. Persistence and degradability**

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Urethane Polymer	68130-40-5	Data not availbl-insufficient			N/A	
Carbon Black	1333-86-4	Data not availbl-insufficient			N/A	
Sulfonic Acids, C10-18-Alkane, Ph Esters	70775-94-9	Experimental Biodegradation	28 days	Biological Oxygen Demand	49 % weight	
Kaolin, Calcined	92704-41-1	Data not availbl-insufficient			N/A	
Hydrotreated Light	64742-47-8	Data not availbl-			N/A	

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Petroleum Distillates		insufficient				
Toluene	108-88-3	Experimental Photolysis		Photolytic half-life (in air)	5.2 days (t 1/2)	Other methods
Toluene	108-88-3	Experimental Biodegradation	20 days	Biological Oxygen Demand	80 % weight	
P,P'-Methylenebis(p henyl isocyanate)	101-68-8	Estimated Hydrolysis		Hydrolytic half-life	20 hours (t 1/2)	Other methods
DIBUTYLTIN DICHLORIDE	683-18-1	Modeled Photolysis		Photolytic half-life (in air)	12.7 hours (t 1/2)	Other methods
DIBUTYLTIN DICHLORIDE	683-18-1	Experimental Biodegradation	28 days	Carbon dioxide evolution	5.5 % weight	OECD 301B - Mod. Sturm or CO2

**12.3. Bioaccumulative potential**

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
Urethane Polymer	68130-40-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon Black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Sulfonic Acids, C10-18-Alkane, Ph Esters	70775-94-9	Experimental BCF-Carp	36 days	Bioaccumulation Factor	212	
Kaolin, Calcined	92704-41-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hydrotreated Light Petroleum Distillates	64742-47-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Toluene	108-88-3	Experimental Bioconcentration		Log of Octanol/H2O part. coeff	2.73	Other methods
P,P'-Methylenebis(p henyl isocyanate)	101-68-8	Experimental BCF-Carp	28 days	Bioaccumulation Factor	200	OECD 305E-Bioaccum FI-thru fis
DIBUTYLTIN DICHLORIDE	683-18-1	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**

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

Not hazardous for transportation.

### Marine Transport (IMDG)

**UN Number:**None assigned.

**Proper Shipping Name:**None assigned.

**Technical Name:**None assigned.

**Hazard Class/Division:**None assigned.

**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.

### Air Transport (IATA)

**UN Number:**None assigned.

**Proper Shipping Name:**None assigned.

**Technical Name:**None assigned.

**Hazard Class/Division:**None assigned.

**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

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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 product are in compliance with the chemical notification requirements of TSCA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC 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](http://www.3M.com.my)**