



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Notification of Ministry of Industry, System of Hazardous Classification and Communication B.E.2555.

### SECTION 1: Identification

#### 1.1. Product identifier

3M Windshield Coater

**Company:** 3M Thailand Ltd.

**Address:** 12th Floor, Serm-Mitr Tower 159 Asoke Road (Sukhumvit 21) Bangkok 10110 Thailand

#### Product Identification Numbers

LZ-H100-2892-2

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

##### Recommended use

Automotive, Windshield coater

#### 1.3. Supplier's details

**ADDRESS:** 3M Thailand Limited, Sukhumvit 21, Wattana, Bangkok 10110, Thailand

**Telephone:** 66(0)22608577

**E Mail:** 3MThailand@mmm.com

**Website:** <http://www.3M.com/TH>

#### 1.4. Emergency telephone number

66-2-2608577

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

Flammable Liquid: Category 2.

Acute Toxicity (oral): Category 5.

Serious Eye Damage/Irritation: Category 2A.

Specific Target Organ Toxicity (single exposure): Category 3.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

## 3M Windshield Coater

Flame | Exclamation mark |

### Pictograms



### Hazard Statements

H225 Highly flammable liquid and vapor.  
H303 May be harmful if swallowed.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

### Precautionary statements

#### General:

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

#### Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P271 Use only outdoors or in a well-ventilated area.  
P280E Wear protective gloves.

#### 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.  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
P370 + P378G In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

#### Storage:

P405 Store locked up.

#### Disposal:

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

### 2.3. Other hazards

None known

## SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt
ISOPROPYL ALCOHOL	67-63-0	80 - 95
WHITE MINERAL OIL (PETEROLEUM)	92062-35-6	5 - 15
SILOXANES AND SILICONES, DI-ME, [[3-[(2-AMINOETHYL)AMINO]PROPYL]DIME THOXSILYL]OXY]-TERMINATED	71750-80-6	1 - 2

## 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

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>
Carbon monoxide	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. 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.

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### 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. An appropriate aqueous film forming foam (AFFF) is recommended. 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

Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing 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.) Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard. Wear low static or properly grounded shoes. 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. 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
ISOPROPYL ALCOHOL	67-63-0	ACGIH	TWA:200 ppm;STEL:400 ppm	A4: Not class. as human carcin
ISOPROPYL ALCOHOL	67-63-0	Thailand OELs	TWA(8 hours):400 ppm	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Thailand OELs : Thailand. Ministry of Interior, Re: Notification Health and Safety in the Work Environment on chemical B.E.2520

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.

Gloves made from the following material(s) are recommended: Nitrile Rubber

#### 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

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>	Liquid
<b>Color</b>	Clear Colorless
<b>Odor</b>	Alcohol
<b>Odor threshold</b>	No Data Available
<b>pH</b>	No Data Available
<b>Melting point/Freezing point</b>	No Data Available
<b>Boiling point/Initial boiling point/Boiling range</b>	82 °C [Details:Isopropyl alcohol]
<b>Flash Point</b>	11.7 °C [Details:Isopropyl alcohol]
<b>Evaporation rate</b>	No Data Available
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Flammable Limits(LEL)</b>	No Data Available
<b>Flammable Limits(UEL)</b>	No Data Available
<b>Vapor Pressure</b>	No Data Available
<b>Vapor Density</b>	No Data Available
<b>Density</b>	0.8 - 0.82 g/ml
<b>Relative Density</b>	0.8 - 0.82 [Ref Std: WATER=1]
<b>Water solubility</b>	Nil
<b>Solubility- non-water</b>	No Data Available
<b>Partition coefficient: n-octanol/ water</b>	No Data Available
<b>Autoignition temperature</b>	No Data Available
<b>Decomposition temperature</b>	No Data Available
<b>Viscosity</b>	No Data Available

## 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

Reactive metals

Strong oxidizing agents

Strong acids

### 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
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None known.	
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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:

Contact with the skin during product use is not expected to result in significant irritation.

#### 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.

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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.

**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	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
ISOPROPYL ALCOHOL	Dermal	Rabbit	LD50 12,870 mg/kg
ISOPROPYL ALCOHOL	Inhalation-Vapor (4 hours)	Rat	LC50 72.6 mg/l
ISOPROPYL ALCOHOL	Ingestion	Rat	LD50 4,710 mg/kg
SILOXANES AND SILICONES, DI-ME, [[[3-[(2-AMINOETHYL)AMINO]PROPYL]DIMETHOXY]SILYL]OXY]-TERMINATED	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
ISOPROPYL ALCOHOL	Multiple animal species	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
ISOPROPYL ALCOHOL	Rabbit	Severe irritant

**Skin Sensitization**

Name	Species	Value
ISOPROPYL ALCOHOL	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
ISOPROPYL ALCOHOL	In Vitro	Not mutagenic
ISOPROPYL ALCOHOL	In vivo	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
ISOPROPYL ALCOHOL	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity**

**3M Windshield Coater****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
ISOPROPYL ALCOHOL	Ingestion	Not classified for development	Rat	NOAEL 400 mg/kg/day	during organogenesis
ISOPROPYL ALCOHOL	Inhalation	Not classified for development	Rat	LOAEL 9 mg/l	during gestation

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
ISOPROPYL ALCOHOL	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ISOPROPYL ALCOHOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
ISOPROPYL ALCOHOL	Inhalation	auditory system	Not classified	Guinea pig	NOAEL 13.4 mg/l	24 hours
ISOPROPYL ALCOHOL	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
ISOPROPYL ALCOHOL	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 12.3 mg/l	24 months
ISOPROPYL ALCOHOL	Inhalation	nervous system	Not classified	Rat	NOAEL 12 mg/l	13 weeks
ISOPROPYL ALCOHOL	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 400 mg/kg/day	12 weeks

**Aspiration Hazard**

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

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:**

Not acutely toxic to aquatic life by GHS criteria.

**Chronic aquatic hazard:**

Not chronically toxic to aquatic life by GHS criteria.

No product test data available

Material	Cas #	Organism	Type	Exposure	Test Endpoint	Test Result
ISOPROPYL	67-63-0	Crustacea	Experimental	24 hours	Lethal	>10,000 mg/l

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ALCOHOL					Concentration 50%	
ISOPROPYL ALCOHOL	67-63-0	Green Algae	Experimental	72 hours	Effect Concentration 50%	>1,000 mg/l
ISOPROPYL ALCOHOL	67-63-0	Ricefish	Experimental	96 hours	Lethal Concentration 50%	>100 mg/l
ISOPROPYL ALCOHOL	67-63-0	Water flea	Experimental	48 hours	Effect Concentration 50%	>1,000 mg/l
ISOPROPYL ALCOHOL	67-63-0	Green algae	Experimental	72 hours	No obs Effect Conc	1,000 mg/l
ISOPROPYL ALCOHOL	67-63-0	Water flea	Experimental	21 days	No obs Effect Conc	100 mg/l
WHITE MINERAL OIL (PETEROLEUM)	92062-35-6		Data not available or insufficient for classification			
SILOXANES AND SILICONES, DI-ME, [[[3-[(2-AMINOETHYL)AMINO]PROPYL]DIMETHOXY]SILYL]OXY]TERMINATED	71750-80-6		Data not available or insufficient for classification			

**12.2. Persistence and degradability**

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
ISOPROPYL ALCOHOL	67-63-0	Experimental Biodegradation	14 days	Biological Oxygen Demand	86 % BOD/ThBOD	OECD 301C - MITI (I)
WHITE MINERAL OIL (PETEROLEUM)	92062-35-6	Data not available - insufficient			N/A	
SILOXANES AND SILICONES, DI-ME, [[[3-[(2-AMINOETHYL)AMINO]PROPYL]DIMETHOXY]SILYL]OXY]TERMINATED	71750-80-6	Data not available - insufficient			N/A	

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**12.3. Bioaccumulative potential**

Material	CAS No.	Test Type	Duration	Study Type	Test Result	Protocol
ISOPROPYL ALCOHOL	67-63-0	Experimental Bioconcentration		Log of Octanol/H <sub>2</sub> O part. coeff	0.05	Other methods
WHITE MINERAL OIL (PETROLEUM)	92062-35-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
SILOXANES AND SILICONES, DI-ME, [[3-[(2-AMINOETHYL)AMINO]PROPYL]DIMETHOXY]TERMINATED	71750-80-6	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**

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

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

**SECTION 14: Transport Information****Marine Transport (IMDG)**

**UN Number:**UN1219

**Proper Shipping Name:**ISOPROPYL ALCOHOL

**Hazard Class/Division:**3

**Packing Group:**II

**Air Transport (IATA)**

**UN Number:**UN1219

**Proper Shipping Name:**ISOPROPYL ALCOHOL

**Hazard Class/Division:**3

**Packing Group:**II

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

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Global inventory status**

Contact 3M for more information.

**SECTION 16: Other information**

DISCLAIMER: The information 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 Thailand SDSs are available at <http://www.3M.com/TH>**