



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586: 2008 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

<b>Document group:</b>	30-3631-6	<b>Version number:</b>	1.01
<b>Issue Date:</b>	31/10/2013	<b>Supersedes date:</b>	10/05/2012

## IDENTIFICATION

### 1.1. Product identifier

3M™ Surface Pre-Treatment AC-131

#### Product identification numbers

70-0052-0020-2      70-0052-0021-0      70-0052-0022-8      70-0052-0023-6      70-0052-0024-4

### 1.2. Recommended use and restrictions on use

#### Recommended use

Metal Adhesion Promoter

### 1.3. Supplier's details

**Address:** 3M Technologies (S) Pte Ltd, 1 Yishun Avenue 7, Singapore 768923  
**Telephone:** +65 6450 8888  
**Website:** [www.3m.com.sg](http://www.3m.com.sg)

### 1.4. Emergency telephone number

**Company Emergency Hotline:** +65 6849 3050

**This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:**

30-3630-8, 30-3638-1, 30-3636-5, 30-3634-0

## TRANSPORT INFORMATION

### International Regulations

**UN No.:** Not restricted for transport.

**UN Proper shipping name:** Not restricted for transport.

**Transportation Class (IMO):** Not applicable

**Transportation Class (IATA):** Not applicable

**Packing Group:** Not applicable

**Marine pollutant:** Not applicable

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**3M Singapore SDSs are available at [www.3m.com.sg](http://www.3m.com.sg)**



## Safety Data Sheet

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<b>Document group:</b>	30-3636-5	<b>Version number:</b>	1.04
<b>Issue Date:</b>	24/07/2018	<b>Supersedes date:</b>	19/06/2018

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Surface Pre-Treatment AC-131 (Part B)

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

##### Recommended use

Metal Adhesion Promoter, For industrial or professional use only.

#### 1.3. Supplier's details

**Address:** 3M Technologies (S) Pte Ltd, 10 Ang Mo Kio Street 65, Singapore 569059  
**Telephone:** +65 6450 8888  
**Website:** www.3m.com.sg

#### 1.4. Emergency telephone number

+65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

### SECTION 2: Hazard identification

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

Flammable Liquid: Category 2.

Serious Eye Damage/Irritation: Category 2A

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

#### 2.2. Label elements

##### SIGNAL WORD

DANGER!

##### Symbols

Flame | Exclamation mark |

##### Pictograms



**HAZARD STATEMENTS**

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

**PRECAUTIONARY STATEMENTS****Prevention:**

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.

**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.
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.
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**2.3. Other hazards**

None known.

**SECTION 3: Composition/information on ingredients**

This material is a mixture.

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>% by Wt</b>
TETRAPROPYL ZIRCONATE	23519-77-9	70 - 80
Propan-1-ol	71-23-8	20 - 30

**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.

### 6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

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

Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR-AFFF type foam 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 detergent and water. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Keep 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/vapours/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 oxidising agents (eg. chlorine, chromic acid etc.) 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 cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidising 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.

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional comments</b>
Carbonic Acid, Zirconium Complex	23519-77-9	ACGIH	TWA(as Zr):5 mg/m <sup>3</sup> ;STEL(as Zr):10 mg/m <sup>3</sup>	A4: Not class. as human carcin
Carbonic Acid, Zirconium Complex	23519-77-9	Singapore PELs	TWA(as Zr)(8 hours):5 mg/m <sup>3</sup> ;STEL(as Zr)(15 minutes):10 mg/m <sup>3</sup>	
Propan-1-ol	71-23-8	ACGIH	TWA:100 ppm	A4: Not class. as human carcin
Propan-1-ol	71-23-8	Singapore PELs	TWA(8 hours):492 mg/m <sup>3</sup> (200 ppm);STEL(15 minutes):614 mg/m <sup>3</sup> (250 ppm)	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

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/vapours/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: Butyl rubber.

Fluoroelastomer

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 vapours

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>Appearance/Odour</b>	Clear amber-coloured liquid; slight odour
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>No data available.</i>
<b>Melting point/Freezing point</b>	<i>No data available.</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	> 82.2 °C
<b>Flash point</b>	22.2 °C [ <i>Test Method</i> :Closed Cup]
<b>Evaporation rate</b>	<i>No data available.</i>
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	2.2 %
<b>Flammable Limits(UEL)</b>	13.7 %
<b>Vapour pressure</b>	<i>No data available.</i>
<b>Vapour density</b>	2.11 [ <i>Ref Std</i> :AIR=1]
<b>Density</b>	1.05 g/ml
<b>Relative density</b>	1.05 [ <i>Ref Std</i> :WATER=1]
<b>Water solubility</b>	<i>No data available.</i>
<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>	<i>Not applicable.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>
<b>Viscosity</b>	<i>No data available.</i>
<b>Molecular weight</b>	<i>No data available.</i>
<b>Volatile organic compounds (VOC)</b>	262 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1]
<b>VOC less H2O &amp; exempt solvents</b>	262 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1]

## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

This material is considered to be non reactive under normal use conditions

### **10.2 Chemical stability**

Stable.

### **10.3 Possibility of hazardous reactions**

Hazardous polymerisation will not occur.

### **10.4 Conditions to avoid**

Heat.

Sparks and/or flames.

### **10.5 Incompatible materials**

Strong acids.

Strong oxidising 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 labelling, 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. May cause additional health effects (see below).

**Skin contact**

May be harmful in contact with skin.

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 diarrhoea.

**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	Dermal		No data available; calculated ATE2,000 - 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
Propan-1-ol	Dermal	Rabbit	LD50 4,000 mg/kg
Propan-1-ol	Inhalation-Vapor (4	Rat	LC50 > 34 mg/l



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	hours)		
Propan-1-ol	Ingestion	Rat	LD50 estimated to be 2,000 - 5,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Propan-1-ol	Rabbit	Minimal irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
TETRAPROPYL ZIRCONATE	Professional judgement	Mild irritant
Propan-1-ol	Rabbit	Severe irritant

**Skin Sensitisation**

Name	Species	Value
Propan-1-ol	Guinea pig	Not classified

**Respiratory Sensitisation**

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

**Germ Cell Mutagenicity**

Name	Route	Value
Propan-1-ol	In Vitro	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
Propan-1-ol	Ingestion	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
Propan-1-ol	Inhalation	Not classified for male reproduction	Rat	NOAEL 8.6 mg/l	6 weeks
Propan-1-ol	Inhalation	Not classified for development	Rat	NOAEL 8.6 mg/l	during gestation

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
TETRAPROPYL ZIRCONATE	Inhalation	respiratory irritation	Not classified		NOAEL Not available	
Propan-1-ol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Mouse	NOAEL 5 mg/l	4 hours
Propan-1-ol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	
Propan-1-ol	Ingestion	central nervous	May cause drowsiness or	Professional	NOAEL Not	

**3M™ Surface Pre-Treatment AC-131 (Part B)**

		system depression	dizziness	nal judgement	available	
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**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Propan-1-ol	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 70 mg/kg/day	83 weeks
Propan-1-ol	Ingestion	liver	Not classified	Rat	LOAEL 70 mg/kg/day	83 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 labelling, 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 Nbr	Organism	Type	Exposure	Test endpoint	Test result
TETRAPROPYL ZIRCONATE	23519-77-9		Data not available or insufficient for classification			
Propan-1-ol	71-23-8	Algae other	Experimental	96 hours	EC50	4,480 mg/l
Propan-1-ol	71-23-8	Fathead minnow	Experimental	96 hours	LC50	4,555 mg/l
Propan-1-ol	71-23-8	Fish	Experimental	96 hours	LC50	3,000 mg/l
Propan-1-ol	71-23-8	Water flea	Experimental	48 hours	EC50	3,642 mg/l
Propan-1-ol	71-23-8	Water flea	Experimental	21 days	NOEC	>100 mg/l

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
TETRAPROPYL ZIRCONATE	23519-77-9	Data not available-insufficient			N/A	
Propan-1-ol	71-23-8	Experimental Biodegradation	20 days	BOD	73 % BOD/ThBOD	OECD 301D - Closed bottle test

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### 12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
TETRAPROPYL ZIRCONATE	23519-77-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Propan-1-ol	71-23-8	Experimental Bioconcentration		Log Kow	0.2	Other methods

### 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.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration 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

### International Regulations

UN No.: None assigned

UN Proper shipping name: None assigned

Transportation Class (IMO): None assigned

Transportation Class (IATA): None assigned

Other Dangerous Goods Descriptions (IMO): None assigned

Other Dangerous Goods Descriptions (IATA): None assigned

Packing Group: None assigned

Marine pollutant: None assigned

## SECTION 15: Regulatory information

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

#### Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in

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compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. 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.

**This product may contain component(s) that are regulated by the following:**

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Fire Safety (Petroleum And Flammable Materials) Regulations: this product is subject to import, transport and storage requirements in the Regulation.

Environmental Pollution Control (Hazardous Substances) Regulations: This product is subject to the requirements of this Regulation.

## 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 Singapore SDSs are available at [www.3m.com.sg](http://www.3m.com.sg)**



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**Document group:** 30-3638-1  
**Issue Date:** 28/10/2013

**Version number:** 1.01  
**Supersedes date:** 08/05/2013

### SECTION 1: Identification

#### 1.1. Product identifier

3M Surface Pre-Treatment AC-131 Part C

LC-B100-1147-4      LC-B100-1147-5      LC-B100-1147-6      LC-B100-1147-7      LC-B100-1147-8

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

##### Recommended use

Metal Adhesion Promoter

#### 1.3. Supplier's details

**Address:** 3M Technologies (S) Pte Ltd, 1 Yishun Avenue 7, Singapore 768923  
**Telephone:** +65 6450 8888  
**Website:** www.3m.com.sg

#### 1.4. Emergency telephone number

+65 6849 3050

### SECTION 2: Hazard identification

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

Serious Eye Damage/Irritation: Category 1.

Reproductive Toxicity: Category 2.

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

#### 2.2. Label elements

##### SIGNAL WORD

DANGER!

##### Symbols

Corrosion | Health Hazard |

##### Pictograms

**HAZARD STATEMENTS**

H318	Causes serious eye damage.
H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs: sensory organs

**PRECAUTIONARY STATEMENTS****Prevention:**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280A	Wear eye/face protection.
P281	Use personal protective equipment as required.
P270	Do not eat, drink or smoke when using this product.
P264	Wash thoroughly after handling.

**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.
P310	Immediately call a POISON CENTER or doctor/physician.
P309 + P311	IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician.
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**

None known.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	2530-83-8	97 - 100
Methanol	67-56-1	0 - 3

## 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**

Wash with soap and water. If signs/symptoms develop, get medical attention.

#### **Eye contact**

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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**

This product contains methanol. Methanol poisoning can cause metabolic acidosis, blindness, and death. Onset of signs or symptoms may be delayed for 18 to 24 hours. If methanol poisoning is confirmed, intravenous (IV) administration of ethanol should be considered. Additional pharmacologic and supportive care should be based on the treating physician's judgement.

### **SECTION 5: Fire-fighting measures**

#### **5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

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

None inherent in this product.

#### **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**

No unusual fire or explosion hazards are anticipated.

### **SECTION 6: Accidental release measures**

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

Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning: A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

#### **6.2. Environmental precautions**

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

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

Contain spill. 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. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

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

Protect from sunlight. Store away from heat. Store away from oxidising agents.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional comments</b>
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	2530-83-8	Chemical Manufacturer Rec Guid	TWA:5 ppm	
Methanol	67-56-1	Amer Conf of Gov. Indust. Hyg.	TWA:200 ppm;STEL:250 ppm	Skin Notation
Methanol	67-56-1	Singapore PELs	TWA(8 hours):262 mg/m <sup>3</sup> (200 ppm);STEL(15 minutes):328 mg/m <sup>3</sup> (250 ppm)	

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists

Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

Use with spray booth or local exhaust. 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/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

Wear 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: Polyvinyl chloride.

### 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:

Full facepiece pressure demand self-contained breathing apparatus

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours

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.
Appearance/Odour	Clear liquid; slight odour
Odour threshold	No data available.
pH	Not applicable.
Melting point/Freezing point	No data available.
Boiling point/Initial boiling point/Boiling range	No data available.
Flash point	>=93.3 °C [Test Method: Closed Cup]
Evaporation rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	No data available.
Flammable Limits(UEL)	No data available.
Vapour pressure	133.3 Pa [@ 20 °C ]
Vapour density	>=1 [Ref Std: AIR=1]
Density	1.07 g/ml
Relative density	1.07 [Ref Std: WATER=1]
Water solubility	No data available.
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	Not applicable.
Decomposition temperature	No data available.
Viscosity	No data available.
VOC less H2O & exempt solvents	0.017 lb/gal

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is considered to be non reactive under normal use conditions

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

Heat.

**10.5 Incompatible materials**

Strong oxidising agents.

**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 labelling, 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 target organ effects after inhalation.

**Skin contact**

May be harmful in contact with skin.

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

**Eye contact**

Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

**Ingestion**

May be harmful if swallowed.

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

May cause target organ effects after ingestion.

**Target Organ Effects:****Single exposure may cause:**

May cause blindness.

**Reproductive/Developmental Toxicity:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Toxicological Data****Acute Toxicity**

Name	Route	Species	Value
Overall product	Dermal		Data not available or insufficient for classification; calculated ATE3,606.6 mg/kg
Overall product	Inhalation-Vapor(4 hr)		Data not available or insufficient for classification; calculated ATE >50 mg/l

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Overall product	Ingestion		Data not available or insufficient for classification; calculated ATE3,333.3 mg/kg
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Dermal	Rabbit	LD50 4,000 mg/kg
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Rat	LD50 7,010 mg/kg
Methanol	Dermal		LD50 estimated to be 1,000 - 2,000 mg/kg
Methanol	Inhalation-Vapor		LC50 estimated to be 10 - 20 mg/l
Methanol	Ingestion		LD50 estimated to be 50 - 300 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Rabbit	Mild irritant
Methanol	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Rabbit	Corrosive
Methanol	Rabbit	Moderate irritant

**Skin Sensitisation**

Name	Species	Value
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Methanol	Guinea pig	Not sensitizing

**Respiratory Sensitisation**

Name	Species	Value
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane		Data not available or insufficient for classification
Methanol		Data not available or insufficient for classification

**Germ Cell Mutagenicity**

Name	Route	Value
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	In vivo	Not mutagenic
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
Methanol	In vivo	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Dermal	Mouse	Not carcinogenic
Methanol	Inhalation	Multiple animal species	Not carcinogenic

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

Name	Route	Value	Species	Test result	Exposure Duration
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-Epoxypropoxy)propyl]	Ingestion	Some positive developmental data exist,	Rat	NOAEL	during

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trimethoxysilane		but the data are not sufficient for classification		3,000 mg/kg/day	organogenesis
Methanol	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,600 mg/kg/day	21 days
Methanol	Ingestion	Toxic to development	Mouse	LOAEL 4,000 mg/kg/day	during organogenesis
Methanol	Inhalation	Toxic to development	Mouse	NOAEL 1.3 mg/l	during organogenesis

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Methanol	Inhalation	blindness	Causes damage to organs	Human	NOAEL Not available	occupational exposure
Methanol	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
Methanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	6 hours
Methanol	Ingestion	blindness	Causes damage to organs	Human	NOAEL Not available	poisoning and/or abuse
Methanol	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
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Ingestion	heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system   kidney and/or bladder   respiratory system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Methanol	Inhalation	liver	All data are negative	Rat	NOAEL 6.55 mg/l	4 weeks
Methanol	Inhalation	respiratory system	All data are negative	Rat	NOAEL 13.1 mg/l	6 weeks
Methanol	Ingestion	liver   nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	90 days

**Aspiration Hazard**

Name	Value
[3-(2,3-Epoxypropoxy)propyl] trimethoxysilane	Not an aspiration hazard
Methanol	Not an 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 labelling, 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 Nbr	Organism	Type	Exposure	Test endpoint	Test result
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Common Carp	Experimental	96 hours	LC50	55 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	EC50	350 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Water flea	Experimental	48 hours	EC50	473 mg/l
Methanol	67-56-1	Fathead minnow	Experimental	96 hours	LC50	22,300 mg/l
Methanol	67-56-1	Algae or other aquatic plants	Experimental	96 hours	EC50	16.9 mg/l
Methanol	67-56-1	Water flea	Experimental	48 hours	EC50	22,200 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Water flea	Experimental	21 days	NOEC	>=100 mg/l
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	NOEC	130 mg/l
Methanol	67-56-1	Algae or other aquatic plants	Experimental	96 hours	NOEC	9.96 mg/l

### 12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life	6.5 hours (t <sub>1/2</sub> )	Other methods
[3-(2,3-	2530-83-8	Experimental	28 days	Dissolv.	37 % weight	Other methods

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Epoxypropoxy [3-(2,3- trimethoxysila ne		Biodegradation		Organic Carbon Deplet		
Methanol	67-56-1	Experimental Biodegradation	14 days	BOD	92 % weight	OECD 301C - MITI test (I)

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
[3-(2,3- Epoxypropoxy [3-(2,3- trimethoxysila ne	2530-83-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Methanol	67-56-1	Experimental BCF-Carp	3 days	Bioaccumulati on factor	1	Other methods
Methanol	67-56-1	Experimental Bioconcentrati on		Log Kow	-0.77	Other methods

**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**

See Section 11.1 Information on toxicological effects

Dispose of completely cured (or polymerised) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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****International Regulations**

UN No.: Not applicable

UN Proper shipping name: Not applicable

Transportation Class (IMO): Not applicable

Transportation Class (IATA): Not applicable

Packing Group: Not applicable

Marine pollutant: Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Global inventory status**

Contact 3M for more information. The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. 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 Japan Chemical Substance Control Law. 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. The components of this product are in compliance with the chemical notification requirements of TSCA.

**This product may contain component(s) that are regulated by the following:**

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Fire Safety (Petroleum And Flammable Materials) Regulations: this product is subject to import, transport and storage requirements in the Regulation.

Sewerage & Drainage Act and Sewerage and Drainage (Trade Effluent) Regulations: This product is subject to the requirements in the act/regulation.

Environmental Pollution Control (Hazardous Substances) Regulations: This product is subject to the requirements of this Regulation.

**SECTION 16: Other information****Revision information:**

No revision information is available.

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 Singapore SDSs are available at [www.3m.com.sg](http://www.3m.com.sg)**



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586: 2008 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

**Document group:** 30-3630-8  
**Issue Date:** 30/10/2013

**Version number:** 1.01  
**Supersedes date:** 08/05/2013

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Surface Pre-Treatment AC-131 (Part A)

LC-B100-1146-3      LC-B100-1146-4      LC-B100-1146-5      LC-B100-1146-6      LC-B100-1146-7

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

##### Recommended use

Metal adhesion promoter

#### 1.3. Supplier's details

**Address:** 3M Technologies (S) Pte Ltd, 1 Yishun Avenue 7, Singapore 768923  
**Telephone:** +65 6450 8888  
**Website:** [www.3m.com.sg](http://www.3m.com.sg)

#### 1.4. Emergency telephone number

+65 6849 3050

### SECTION 2: Hazard identification

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

Flammable liquid: Category 3.

Serious Eye Damage/Irritation: Category 1.

Skin Corrosion/Irritation: Category 1.

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

#### 2.2. Label elements

##### SIGNAL WORD

DANGER!

##### Symbols

Flame | Corrosion | Health Hazard |

##### Pictograms





## HAZARD STATEMENTS

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H314	Causes severe skin burns and eye damage.
H370	Causes damage to organs: blood or blood-forming organs kidney/urinary tract respiratory system

## PRECAUTIONARY STATEMENTS

### Prevention:

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240	Ground/bond container and receiving equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P233	Keep container tightly closed.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280D	Wear protective gloves, protective clothing, and eye/face protection.
P280B	Wear protective gloves and eye/face protection.
P280A	Wear eye/face protection.
P270	Do not eat, drink or smoke when using this product.
P264	Wash thoroughly after handling.

### Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P307 + P311	IF exposed: Call a POISON CENTER or doctor/physician.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P321	Specific treatment (see Notes to Physician on this label).
P370 + P378G	In case of fire: Use a fire fighting agent suitable for flammable liquids and solids such as dry chemical or carbon dioxide to extinguish.

### Storage:

P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

### Disposal:

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

- May cause chemical gastrointestinal burns.

**SECTION 3: Composition/information on ingredients**

This material is a mixture.

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>% by Wt</b>
Acetic acid	64-19-7	100

**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 flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

**Eye contact**

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

**If swallowed**

Rinse mouth. Do not induce vomiting. Get immediate 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 and solids 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****Substance**

Carbon monoxide.  
Carbon dioxide.

**Condition**

During combustion.  
During combustion.

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

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

## 3M™ Surface Pre-Treatment AC-131 (Part A)

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 vapours, in accordance with good industrial hygiene practice. Warning: A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### 6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

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

Contain spill. 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. Absorb spillage to prevent material damage. 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 use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Clean up residue with water. Seal the container. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Do not breathe dust/fume/gas/mist/vapours/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. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

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

Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. Store away from strong bases. Store away from oxidising agents.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Acetic acid	64-19-7	Amer Conf of Gov. Indust. Hyg.	TWA:10 ppm;STEL:15 ppm	
Acetic acid	64-19-7	Singapore PELs	TWA(8 hours):25 mg/m3(10 ppm);STEL(15 minutes):37 mg/m3(15 ppm)	

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists

Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order

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/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

## 8.2.2. Personal protective equipment (PPE)

### Eye/face protection

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

Full face shield.

Indirect vented goggles.

### Skin/hand protection

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

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

Neoprene.

Nitrile rubber.

Polyethylene

Polyvinyl chloride.

### 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:

Full facepiece pressure demand self-contained breathing apparatus

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours

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.
Appearance/Odour	Clear; vinegar odour
Odour threshold	No data available.
pH	No data available.
Melting point/Freezing point	Not applicable.
Boiling point/Initial boiling point/Boiling range	117.8 °C
Flash point	39 °C [Test Method: Closed Cup]
Evaporation rate	1.34 [Ref Std: BUOAC=1]
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	4 %
Flammable Limits(UEL)	19.9 %
Vapour pressure	1,519.9 Pa [@ 25 °C]
Vapour density	2.11 [Ref Std: AIR=1]
Density	1.05 g/ml
Relative density	1.05 [Ref Std: WATER=1]
Water solubility	Complete
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	426 °C

Decomposition temperature	No data available.
Viscosity	No data available.
Volatile organic compounds (VOC)	1,050 g/l

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is considered to be non reactive under normal use conditions

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

Heat.

Sparks and/or flames.

### 10.5 Incompatible materials

Water

Strong bases.

Strong oxidising agents.

### 10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
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 labelling, 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 target organ effects after inhalation.

#### Skin contact

Corrosive (skin burns): Signs/symptoms may include localised redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

#### Eye contact

**3M™ Surface Pre-Treatment AC-131 (Part A)**

Corrosive (eye burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

**Ingestion**

May be harmful if swallowed.

Gastrointestinal corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain, nausea, vomiting, and diarrhea; blood in the faeces and/or vomitus may also be seen. May cause target organ effects after ingestion.

**Target Organ Effects:****Single exposure may cause:**

Blood effects: Signs/symptoms may include generalised weakness and fatigue, skin pallor, changes in blood clotting time, internal bleeding, and hemoglobinemia. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure. Kidney/Bladder effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

**Toxicological Data****Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		Data not available or insufficient for classification; calculated ATE3,310 mg/kg
Acetic acid	Dermal	Rabbit	LD50 1,060 mg/kg
Acetic acid	Inhalation-Vapor (4 hours)	Rat	LC50 11.4 mg/l
Acetic acid	Ingestion	Rat	LD50 3,310 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Acetic acid	Rabbit	Corrosive

**Serious Eye Damage/Irritation**

Name	Species	Value
Acetic acid	Rabbit	Corrosive

**Skin Sensitisation**

Name	Species	Value
Acetic acid		Data not available or insufficient for classification

**Respiratory Sensitisation**

Name	Species	Value
Acetic acid	Human	Some positive data exist, but the data are not sufficient for classification

**Germ Cell Mutagenicity**

Name	Route	Value
Acetic acid	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Acetic acid	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Acetic acid	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity**

**3M™ Surface Pre-Treatment AC-131 (Part A)****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Acetic acid	Ingestion	Not toxic to development	Rat	NOAEL 80 mg/kg/day	during gestation

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

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Acetic acid	Inhalation	respiratory system	Causes damage to organs	Human	NOAEL Not available	not applicable
Acetic acid	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure
Acetic acid	Ingestion	blood   kidney and/or bladder	Causes damage to organs	Human	NOAEL Not available	not applicable

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Acetic acid			Data not available or insufficient for classification			

**Aspiration Hazard**

Name	Value
Acetic acid	Not an 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 labelling, 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:**

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Acetic acid	64-19-7	Algae	Experimental	96 hours	EC50	73.4 mg/l
Acetic acid	64-19-7	Bluegill	Experimental	96 hours	LC50	75 mg/l
Acetic acid	64-19-7	Crustacea	Experimental	48 hours	EC50	32 mg/l
Acetic acid	64-19-7	Fish	Experimental	90 days	NOEC	1.26 mg/l

**12.2. Persistence and degradability**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
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**3M™ Surface Pre-Treatment AC-131 (Part A)**

Acetic acid	64-19-7	Experimental Photolysis		Photolytic half-life (in air)	43.2 days (t <sub>1/2</sub> )	Other methods
Acetic acid	64-19-7	Experimental Biodegradation	14 days	BOD	74 % weight	OECD 301C - MITI test (I)

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Acetic acid	64-19-7	Experimental Bioconcentration		Log Kow	-0.17	Other methods

**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**

See Section 11.1 Information on toxicological effects

Incinerate in a permitted waste incineration facility. Dispose of waste product in a permitted industrial waste 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****International Regulations**

**UN No.:** Not restricted for transport.

**UN Proper shipping name:** Not restricted for transport.

**Transportation Class (IMO):** Not applicable

**Transportation Class (IATA):** Not applicable

**Packing Group:** Not applicable

**Marine pollutant:** Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Global inventory status**

Contact 3M for more information. The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. 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 Japan Chemical Substance Control Law. 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. The components of this product are in compliance with the chemical notification requirements of TSCA.

**This product may contain component(s) that are regulated by the following:**

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Environmental Pollution Control (Hazardous Substances) Regulations: This product is subject to the requirements of this Regulation.

## **SECTION 16: Other information**

**Revision information:**

No revision information is available.

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 Singapore SDSs are available at [www.3m.com.sg](http://www.3m.com.sg)**



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the SS586: 2008 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

<b>Document group:</b>	30-3634-0	<b>Version number:</b>	1.02
<b>Issue Date:</b>	06/03/2014	<b>Supersedes date:</b>	30/10/2013

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Surface Pre-Treatment AC-131 (Part D)

#### Product Identification Numbers

LC-B100-1147-9	LC-B100-1148-0	LC-B100-1148-1	LC-B100-1148-2	LC-B100-1148-3
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#### 1.2. Recommended use and restrictions on use

##### Recommended use

Part D of Metal Adhesion Promoter

#### 1.3. Supplier's details

**Address:** 3M Technologies (S) Pte Ltd, 1 Yishun Avenue 7, Singapore 768923

**Telephone:** +65 6450 8888

**Website:** [www.3m.com.sg](http://www.3m.com.sg)

#### 1.4. Emergency telephone number

+65 6849 3050

### SECTION 2: Hazard identification

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

This product is not classified as hazardous per GHS criteria as implemented by Singapore Standard SS586: 2008.

#### 2.2. Label elements

##### SIGNAL WORD

Not applicable.

##### Symbols

Not applicable.

##### Pictograms

Not applicable.

#### 2.3. Other hazards

None known.

**SECTION 3: Composition/information on ingredients**

This material is a mixture.

<b>Ingredient</b>	<b>CAS Nbr</b>	<b>% by Wt</b>
Water	7732-18-5	100

**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation**

No need for first aid is anticipated.

**Skin contact**

No need for first aid is anticipated.

**Eye contact**

No need for first aid is anticipated.

**If swallowed**

No need for first aid is anticipated.

**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**

Material will not burn. Non-combustible. Use a fire fighting agent suitable for surrounding fire.

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

None inherent in this product.

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

No unusual fire or explosion hazards are anticipated.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Not applicable.

**6.2. Environmental precautions**

Avoid release to the environment.

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

Contain spill. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

For industrial or professional use only.

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

No special storage requirements.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

No engineering controls required.

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

None required.

##### Skin/hand protection

No chemical protective gloves are required.

##### Respiratory protection

None required.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Appearance/Odour	Clear, odourless liquid
Odour threshold	<i>No data available.</i>
pH	7 [ <i>Details: approximately</i> ]
Melting point/Freezing point	<i>No data available.</i>
Boiling point/Initial boiling point/Boiling range	100 °C [ <i>@ 101,325 Pa</i> ]
Flash point	No flash point
Evaporation rate	<i>No data available.</i>
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>No data available.</i>
Vapour density	<i>No data available.</i>
Density	1 g/ml
Relative density	1 [ <i>@ 20 °C</i> ] [ <i>Ref Std: WATER=1</i> ]
Water solubility	Complete
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Autoignition temperature	<i>Not applicable.</i>

Decomposition temperature	No data available.
Viscosity	No data available.
Percent volatile	0 % weight

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is considered to be non reactive under normal use conditions

### 10.2 Chemical stability

Stable.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

None known.

### 10.5 Incompatible materials

None known.

### 10.6 Hazardous decomposition products

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

## 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 labelling, 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

No health effects are expected.

#### Skin contact

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

#### Eye contact

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

#### Ingestion

No health effects are expected.

#### 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

**3M™ Surface Pre-Treatment AC-131 (Part D)**

the data are not sufficient for classification.

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
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**Serious Eye Damage/Irritation**

Name	Species	Value
------	---------	-------

**Skin Sensitisation**

Name	Species	Value
------	---------	-------

**Respiratory Sensitisation**

Name	Species	Value
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**Germ Cell Mutagenicity**

Name	Route	Value
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**Carcinogenicity**

Name	Route	Species	Value
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**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
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**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
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**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
------	-------	-----------------	-------	---------	-------------	-------------------

**Aspiration Hazard**

Name	Value
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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 labelling, 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**

## 3M™ Surface Pre-Treatment AC-131 (Part D)

### **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.

No component test data available.

### **12.2. Persistence and degradability**

No test data available.

### **12.3 : Bioaccumulative potential**

No test data available.

### **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**

See Section 11.1 Information on toxicological effects

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

## SECTION 14: Transport Information

### **International Regulations**

**UN No.:** Not restricted for transport.

**UN Proper shipping name:** Not restricted for transport.

**Transportation Class (IMO):** Not applicable

**Transportation Class (IATA):** Not applicable

**Packing Group:** Not applicable

**Marine pollutant:** Not applicable

## SECTION 15: Regulatory information

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

#### **Global inventory status**

Contact 3M for more information. The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. 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 Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the

## **3M™ Surface Pre-Treatment AC-131 (Part D)**

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. The components of this product are in compliance with the chemical notification requirements of TSCA.

### **This product may contain component(s) that are regulated by the following:**

Workplace Safety and Health Act & Workplace Safety and Health (General Provisions) Regulations: this product is subject to SDS, labelling, PEL and other requirements in the Act/Regulations.

Environmental Pollution Control (Hazardous Substances) Regulations: This product is subject to the requirements of this Regulation.

## **SECTION 16: Other information**

### **Revision information:**

Revision Changes:

Section 11: Acute Toxicity table information was modified.

Section 5: Fire - Extinguishing media information information was modified.

Section 6: Accidental release environmental information information was modified.

Section 8: Personal Protection - Skin/hand information information was modified.

Section 13: Standard Phrase Category Waste GHS information was modified.

Copyright information was modified.

Section 1: Product identification numbers heading information was added.

Section 8: Appropriate Engineering controls information information was added.

Section 11: Disclosed components not in tables text information was added.

US Section 01 Product Use - Recommended Use information was added.

Section 1: Product use information information was deleted.

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.

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