

# SAFETY DATA SHEET

# **DOW CHEMICAL TAIWAN LIMITED**

Product name: XIAMETER™ OFS-6370 Silane Issue Date: 2018.07.24 Print Date: 2018.07.25

DOW CHEMICAL TAIWAN LIMITED encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

# 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: XIAMETER™ OFS-6370 Silane

Other names: None

Recommended use of the chemical and restrictions on use

Identified uses: Intermediate

COMPANY IDENTIFICATION

DOW CHEMICAL TAIWAN LIMITED 7F., NO. 2, SEC. 1 TUN-HUA S. RD., 10506 SUNGSHAN TAIWAN

Customer Information Number: (86) 21-3851-4988

SDSQuestion@dow.com

**EMERGENCY TELEPHONE NUMBER** 

**24-Hour Emergency Contact:** 886-49-226-0560 **Local Emergency Contact:** 049-226-0560

# 2. HAZARDS IDENTIFICATION

**GHS Classification** 

Flammable liquids - Category 3

GHS label elements Hazard pictograms



Signal word: WARNING!

#### **Hazard statements**

Flammable liquid and vapour.

#### **Precautionary statements**

#### **Prevention**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ ventilating/ lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wear protective gloves/ eye protection/ face protection.

# Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

# **Storage**

Store in a well-ventilated place. Keep cool.

#### Disposal

Dispose of contents/ container to an approved waste disposal plant.

#### Other hazards

Static-accumulating flammable liquid.

# 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: triethoxy(methyl)silane

This product is a substance.

Component	CASRN	Concentration
triethoxy(methyl)silane	2031-67-6	>= 86.0 - <= 100.0 %
Ethanol	64-17-5	>= 2.6 - <= 3.5 %
Diethoxydimethylsilane	78-62-6	>= 0.9 - <= 1.2 %

# 4. FIRST AID MEASURES

Description of first aid measures

General advice:

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First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Wash off with plenty of water.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** No emergency medical treatment necessary.

# Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

#### **Protection of first-aiders**

# Indication of any immediate medical attention and special treatment needed

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

#### 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical

Unsuitable extinguishing media: High volume water jet Do not use direct water stream.

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

Hazardous combustion products: Carbon oxides Silicon oxides

**Unusual Fire and Explosion Hazards:** Flash back possible over considerable distance. Exposure to combustion products may be a hazard to health. Vapours may form explosive mixtures with air.

# Advice for firefighters

**Fire Fighting Procedures:** Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Do not use a solid water stream as it may scatter and spread fire.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

**Special protective equipment for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

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# **6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures:** Remove all sources of ignition. Follow safe handling advice and personal protective equipment recommendations.

**Environmental precautions:** Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up:** Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

See sections: 7, 8, 11, 12 and 13.

# 7. HANDLING AND STORAGE

**Precautions for safe handling:** Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Non-sparking tools should be used. Handle in accordance with good industrial hygiene and safety practice.

Use with local exhaust ventilation. Use only in an area equipped with explosion proof exhaust ventilation. Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it isnecessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Ground and bond container and receiving equipment.

**Conditions for safe storage:** Keep in properly labelled containers. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Do not store with the following product types: Strong oxidizing agents. Organic peroxides. Flammable solids. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Gases. Unsuitable materials for containers: None known.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control parameters**

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Ethanol	ACGIH	TWA	1,000 ppm
	ACGIH	STEL	1,000 ppm

TW OEL TWA 1,880 mg/m3 1,000 ppm
TW OEL STEL 1,880 mg/m3 1,000 ppm

Issue Date: 2018.07.24

The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing:

Ethanol

Any type of listing among TWA, STEL, Ceiling and BEI which is missing from above Control parameters table, can be considered as no data available.

# **Exposure controls**

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

#### **Individual protection measures**

**Eye/face protection:** Use safety glasses (with side shields). **Skin protection** 

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

Hygiene measures: No smoking and drinking

9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** 

Physical state liquid colourless
Odor strong

Odor ThresholdNo data availablepHNo data availableMelting point/rangeNo data availableFreezing pointNo data available

Boiling point (760 mmHg) 143 °C

Flash point closed cup 23 °C Evaporation Rate (Butyl Acetate No data available

= 1)

Flammability (solid, gas)

Lower explosion limit

Upper explosion limit

Vapor Pressure

Relative Vapor Density (air = 1)

Not applicable

No data available

No data available

No data available

Relative Density (water = 1) 0.895

Water solubility

No data available

Partition coefficient: n
No data available

octanol/water

Auto-ignition temperatureNo data availableDecomposition temperatureNo data availableKinematic Viscosity1 cSt at 25 °CExplosive propertiesNot explosive

Oxidizing properties The substance or mixture is not classified as oxidizing.

Molecular weightNo data availableParticle sizeNot applicable

NOTE: The physical data presented above are typical values and should not be construed as a specification.

# 10. STABILITY AND REACTIVITY

**Reactivity:** Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

**Possibility of hazardous reactions:** Can react with strong oxidizing agents. Vapours may form explosive mixture with air. Flammable liquid and vapour.

Conditions to avoid: Heat, flames and sparks.

Inhibitor: None

Incompatible materials: Oxidizing agents

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**Product name: XIAMETER™ OFS-6370 Silane** 

Hazardous decomposition products: Ethanol.

#### 11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

# **Route of Exposure**

Please refer to the information below.

#### **Acute toxicity**

#### Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Based on information for component(s):

LD50, Rat, > 5,000 mg/kg Estimated.

# Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Based on information for component(s):

LD50, Rat, > 2,000 mg/kg Estimated.

# Acute inhalation toxicity

Prolonged exposure is not expected to cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

As product: The LC50 has not been determined.

#### **Symptoms**

# Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Prolonged contact may cause slight skin irritation with local redness.

# Serious eye damage/eye irritation

May cause slight temporary eye irritation.

# Sensitization

For skin sensitization:

Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

For respiratory sensitization:

No relevant data found.

# **Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

# Chronic toxicity or long term toxicity

#### Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on available data for the component(s), repeated exposures are not anticipated to cause significant adverse effects.

#### Carcinogenicity

No relevant data found.

### **Teratogenicity**

For the minor component(s): Has caused birth defects in lab animals at high doses.

#### Reproductive toxicity

Contains component(s) which did not interfere with reproduction in animal studies.

# Mutagenicity

Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in some animal genetic toxicity studies and positive in others.

#### **Aspiration Hazard**

Based on available information, aspiration hazard could not be determined.

#### COMPONENTS INFLUENCING TOXICOLOGY:

# triethoxy(methyl)silane

#### Acute inhalation toxicity

LC50, Rat, 4 Hour, dust/mist, > 13.5 mg/l

# **Ethanol**

# **Acute inhalation toxicity**

LC50, Rat, 4 Hour, vapour, 124.7 mg/l

#### Diethoxydimethylsilane

# Acute inhalation toxicity

LC50, Rat, 8 Hour, vapour, > 20 mg/l

# 12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

# **Ecotoxicity**

#### triethoxy(methyl)silane

#### Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). LC50, Danio rerio (zebra fish), 96 Hour, > 500 mg/l

#### Acute toxicity to aquatic invertebrates

EC50, Daphnia sp. (water flea), 48 Hour, > 500 mg/l

# Acute toxicity to algae/aquatic plants

ErC50, Selenastrum capricornutum (green algae), 72 Hour, > 500 mg/l

# Toxicity to bacteria

Based on data from similar materials EC50, 3 Hour, > 100 mg/l, OECD Test Guideline 209

# **Ethanol**

# Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested). LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 11,200 - 13,000 mg/L

# Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, 5,414 mg/l, OECD Test Guideline 202 or Equivalent

# Acute toxicity to algae/aquatic plants

EbC50, Skeletonema costatum (marine diatom), 5 d, Biomass, 10,943 - 11,619 mg/l, OECD Test Guideline 201 or Equivalent

# Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 9 d, 9.6 mg/l

# Diethoxydimethylsilane

# Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

# Persistence and degradability

# triethoxy(methyl)silane

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready

biodegradability. 10-day Window: Pass Biodegradation: 74 % Exposure time: 21 d

# Stability in Water (1/2-life)

, DT50, 4 Hour, pH 7

#### **Ethanol**

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready

biodegradability. 10-day Window: Pass **Biodegradation:** > 70 % **Exposure time:** 5 d

Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 2.08 mg/mg

#### **Photodegradation**

Test Type: Half-life (indirect photolysis)

**Sensitization:** OH radicals **Atmospheric half-life:** 2.99 d

Method: Estimated.

#### Bioaccumulative potential

# triethoxy(methyl)silane

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3). **Partition coefficient:** n-octanol/water(log Pow): 2.2 at 20 °C estimated

#### **Ethanol**

Bioaccumulation: Bioaccumulation is unlikely. Bioconcentration potential is low (BCF < 100

or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -0.31 Measured

# Diethoxydimethylsilane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): 1.57 estimated

Bioconcentration factor (BCF): 3.16 Estimated.

# Mobility in soil

#### triethoxy(methyl)silane

Potential for mobility in soil is slight (Koc between 2000 and 5000).

Partition coefficient (Koc): 2001 Estimated.

#### **Ethanol**

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 1.0 Estimated.

# Diethoxydimethylsilane

Potential for mobility in soil is low (Koc between 500 and 2000).

Partition coefficient (Koc): 560.1 Estimated.

#### Results of PBT and vPvB assessment

#### triethoxy(methyl)silane

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

#### **Ethanol**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

#### Other adverse effects

#### triethoxy(methyl)silane

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

# **Ethanol**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

# 13. DISPOSAL CONSIDERATIONS

**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS

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INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

This product when disposed of in its unused and uncontaminated state should be treated as a hazardous waste.

#### 14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport:

**Proper shipping name** FLAMMABLE LIQUID, N.O.S.(Ethanol,

Diethoxydimethylsilane)

UN number UN 1993

Class 3 Packing group III

Classification for SEA transport (IMO-IMDG):

Proper shipping name FLAMMABLE LIQUID, N.O.S. (Ethanol,

Diethoxydimethylsilane)

UN number UN 1993

Class 3
Packing group III
Marine pollutant No

Transport in bulk Consult IMO regulations before transporting ocean bulk

according to Annex I or II of MARPOL 73/78 and the

**IBC or IGC Code** 

Classification for AIR transport (IATA/ICAO):

**Proper shipping name** Flammable liquid, n.o.s.(Ethanol, Diethoxydimethylsilane)

UN number UN 1993

Class 3 Packing group III

# Specific transport measures and precautionary conditions: No

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional

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transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

# 15. REGULATORY INFORMATION

# **Taiwan Chemical Substance Inventory (TCSI)**

All intentional components are either listed on the Inventory or exempted by regulations, or certified by venders of their supply chemicals.

Applicable regulations in Taiwan:

Regulations on Labelling and Hazard Communication of Hazardous Chemicals

**Occupation Safety and Health Law** 

Waste Disposal Act.

**Rules on Road Traffic Safety** 

Standards of Permissible Exposure Limits in Workplace

# 16. OTHER INFORMATION

#### Revision

Identification Number: 4088579 / A169 / Issue Date: 2018.07.24 / Version: 1.0 Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)	
STEL	time weighted average for short term exposure	
TW OEL	Standards of Permissible Exposure Limits in Workplace	
TWA	8-hour time weighted average	

#### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO -

International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL -Industrial Safety and Health Law (Japan): ISO - International Organisation for Standardization: KECI -Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 -Lethal Dose to 50% of a test population (Median Lethal Dose): MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations: UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

# **Information Source and References**

This SDS is prepared in Taiwan by the Product Regulatory Management group from information supplied by our parent company.

# Date that the MSDS was prepared: Please refer to issue date.

	Company Name: Dow Chemical Taiwan Ltd		
Organization that prepared the MSDS	Address/Telephone: 1.CHUNG-HSIN 1ST STREET, MIN-HSIUNG INDUSTRIAL PARK, MIN-HSIUNG, CHIA-YI HSIEN , TAIWAN /(05)2210948 ext. 112		
Prepared by	Title: Product Regulatory Specialist	Name: Y.P. Tsai	

DOW CHEMICAL TAIWAN LIMITED urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.