



# SAFETY DATA SHEET

DOW CHEMICAL (AUSTRALIA) PTY LTD

**Product name: DOWSIL™ 580 (AUS) Glass, Metal and Masonry Sealant Translucent**

**Issue Date: 09.10.2020**

**Print Date: 10.10.2020**

DOW CHEMICAL (AUSTRALIA) PTY LTD 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.

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## SECTION 1: IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

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**Product name: DOWSIL™ 580 (AUS) Glass, Metal and Masonry Sealant Translucent**

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Adhesive, binding agents

### COMPANY IDENTIFICATION

DOW CHEMICAL (AUSTRALIA) PTY LTD  
LEVEL 29  
367 COLLINS STREET  
MELBOURNE VIC 3000  
AUSTRALIA

**Customer Information Number:**

1800-780-074  
SDSQuestion@dow.com

### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 1800-033-882

**Local Emergency Contact:** 1800-033-882

**For advice, contact a doctor (at once) or the Australian Poisons Information Centre: 131 126**

**Transport Emergency Only Dial 000**

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## SECTION 2: HAZARD(S) IDENTIFICATION

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### GHS Classification

Skin corrosion/irritation - Category 2

Serious eye damage/eye irritation - Category 2A

Skin sensitisation - Category 1

### GHS label elements

**Hazard pictograms**



Signal word: **WARNING!**

**Hazard statements**

Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.

**Precautionary statements**

**Prevention**

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
Wash skin thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/ eye protection/ face protection.

**Response**

IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/ attention.  
If eye irritation persists: Get medical advice and/or attention.  
Take off contaminated clothing and wash before reuse.

**Disposal**

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

**Other hazards**

No data available

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**SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS, IN ACCORDANCE WITH SCHEDULE 8**

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This product is a mixture.

<b>Component</b>	<b>CASRN</b>	<b>Concentration</b>
2-Butanone, O,O',O''-(methylsilylidyne)trioxime	22984-54-9	>= 5.0 - <= 6.0 %
Methyltrichlorosilane treated Silica	121375-93-7	>= 4.4 - <= 4.9 %

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Silicon dioxide	7631-86-9	>= 3.4 - <= 4.3 %
3-Aminopropyltriethoxysilane	919-30-2	>= 0.8 - <= 1.2 %
Methyltri(ethylmethylketoxime)silane isomers and oligomers	Not available	<= 0.56 %
Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)siloxane	68928-76-7	>= 0.12 - <= 0.16 %

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## **SECTION 4: FIRST AID MEASURES**

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### **Description of first aid measures**

#### **General advice:**

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 and keep comfortable for breathing. 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:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

#### **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.

#### **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.

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## **SECTION 5: FIREFIGHTING MEASURES**

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### **Hazchem Code**

None Allocated

### **Extinguishing media**

**Suitable extinguishing media:** Water spray. Alcohol-resistant foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical.

**Unsuitable extinguishing media:** None known..

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

**Hazardous combustion products:** Carbon oxides. Silicon oxides. Nitrogen oxides (NO<sub>x</sub>). Chlorine compounds.

**Unusual Fire and Explosion Hazards:** Exposure to combustion products may be a hazard to health..

### **Advice for firefighters**

**Fire Fighting Procedures:** Use water spray to cool unopened containers.. Evacuate area.. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Remove undamaged containers from fire area if it is safe to do so.

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus.. Use personal protective equipment..

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## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment and emergency procedures:** Remove all sources of ignition. Use personal protective equipment. 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. 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:** Wipe up or scrape up and contain for salvage or disposal. 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, store recovered material in appropriate container. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur.  
See sections: 7, 8, 11, 12 and 13.

## SECTION 7: HANDLING AND STORAGE, INCLUDING HOW THE CHEMICAL MAY BE SAFELY USED

**Precautions for safe handling:** Do not get on skin or clothing. Do not swallow. Do not get in eyes. Protect from moisture. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied. Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

**Conditions for safe storage:** Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.  
 Unsuitable materials for containers: Do not store in or use iron or steel containers.

## SECTION 8: EXPOSURE CONTROLS AND 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
Methyltrichlorosilane treated Silica	Dow IHG	TWA Respirable dust	2 mg/m <sup>3</sup>
	Dow IHG	TWA Total dust	6 mg/m <sup>3</sup>
	AU OEL	TWA Respirable dust	2 mg/m <sup>3</sup>
Silicon dioxide	Dow IHG	TWA Respirable dust	2 mg/m <sup>3</sup>
	Dow IHG	TWA Total dust	6 mg/m <sup>3</sup>
	AU OEL	TWA Respirable dust	2 mg/m <sup>3</sup>
3-Aminopropyltriethoxysilane	Dow IHG	TWA	0.5 mg/m <sup>3</sup>
	ACGIH	TWA	0.1 mg/m <sup>3</sup> , Tin
Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	ACGIH	STEL	0.2 mg/m <sup>3</sup> , Tin
	Further information: A4: Not classifiable as a human carcinogen; Skin: Danger of cutaneous absorption		
	AU OEL	TWA	0.1 mg/m <sup>3</sup> , Tin
	Further information: Sk: Skin absorption		
Ethanol	AU OEL	STEL	0.2 mg/m <sup>3</sup> , Tin
	Further information: Sk: Skin absorption		
	ACGIH	TWA	1,000 ppm
	Further information: URT irr: Upper Respiratory Tract irritation		
	ACGIH	STEL	1,000 ppm
Methyl Ethyl Ketoxime	Further information: URT irr: Upper Respiratory Tract irritation		
	AU OEL	TWA	1,880 mg/m <sup>3</sup> 1,000 ppm
	US WEEL	TWA	10 ppm
Further information: DSEN: Dermal Sensitization Notation			

	Dow IHG	TWA	0.15 ppm
Further information: Skin Sensitizer			

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

Ethanol

Methyl ethyl ketoxime

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material.

### **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 chemical goggles.

#### **Skin protection**

**Hand protection:** Use chemical resistant gloves classified under standard AS/NZS 2161.10: Protective gloves against chemicals and micro-organisms. 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"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to AS/NZS 2161.10) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to AS/NZS 2161.10) is recommended. **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:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**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 handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Multi-gas cartridge.

**Other Information:** Selection and use of personal protective equipment should be in accordance with the recommendations in one or more of the relevant Australian/New Zealand Standards, including:

AS/NZS 1336: Eye and face protection – Guidelines.

AS/NZS 1337: Personal eye protection - Eye and face protectors for occupational applications.

AS/NZS 1715: Selection, use and maintenance of respiratory protective equipment.  
AS/NZS 2161: Occupational protective gloves.  
AS/NZS 2210: Occupational protective footwear.  
AS/NZS 4501: Occupational protective clothing Set

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## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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### **Appearance**

<b>Physical state</b>	paste
<b>Color</b>	white translucent
<b>Odor</b>	slight
<b>Odor Threshold</b>	No data available
<b>pH</b>	Not applicable
<b>Melting point/range</b>	No data available
<b>Freezing point</b>	No data available
<b>Boiling point (760 mmHg)</b>	Not applicable
<b>Flash point</b>	Not applicable
<b>Evaporation Rate (Butyl Acetate = 1)</b>	Not applicable
<b>Flammability (solid, gas)</b>	Not classified as a flammability hazard
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Vapor Pressure</b>	Not applicable
<b>Relative Vapor Density (air = 1)</b>	No data available
<b>Relative Density (water = 1)</b>	1.03
<b>Water solubility</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Dynamic Viscosity</b>	Not applicable
<b>Kinematic Viscosity</b>	Not applicable
<b>Explosive properties</b>	Not explosive
<b>Oxidizing properties</b>	The substance or mixture is not classified as oxidizing.
<b>Molecular weight</b>	No data available
<b>Particle size</b>	No data available

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

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## SECTION 10: STABILITY AND REACTIVITY

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

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Can react with strong oxidizing agents.

**Conditions to avoid:** Do not expose to temperatures above 212 °F/100 °C. Exposure to moisture

**Incompatible materials:** Avoid contact with oxidizing materials.

**Hazardous decomposition products:**

Decomposition products can include and are not limited to: Formaldehyde. Methyl Ethyl Ketoxime. Ethanol.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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

**Exposure routes**

Eye contact, Skin contact, Ingestion.

**Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)**

**Acute oral toxicity**

Very low toxicity if swallowed. Swallowing may result in irritation of the mouth, throat, and gastrointestinal tract.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):  
LD50, > 5,000 mg/kg Estimated.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilyldiyl)trioxime**

LD50, Rat, male and female, 2,463 mg/kg OECD Test Guideline 401

**Methyltrichlorosilane treated Silica**

Based on data from similar materials LD50, Rat, > 5,000 mg/kg

**Silicon dioxide**

LD50, Rat, > 5,000 mg/kg

**3-Aminopropyltriethoxysilane**

LD50, Rat, female, 1,479 mg/kg

LD50, Rat, male, 2,665 mg/kg



**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

For similar material(s): LD50, Rat, male and female, 2,463 mg/kg OECD Test Guideline 401

**Bis(2-ethyl-2,5-dimethylhexanoyl)oxy(dimethyl)stannane**

LD50, Rat, male and female, 892 mg/kg OECD 401 or equivalent

**Acute dermal toxicity**

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

As product: The dermal LD50 has not been determined.

Based on information for component(s):  
LD50, > 2,000 mg/kg Estimated.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilylidyne)trioxime**

LD50, Rat, male and female, > 2,000 mg/kg OECD Test Guideline 402 No deaths occurred at this concentration.

**Methyltrichlorosilane treated Silica**

For similar material(s): LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

**Silicon dioxide**

LD50, Rabbit, > 5,000 mg/kg

**3-Aminopropyltriethoxysilane**

Based on product testing: LD50, Rabbit, male and female, 4,041 mg/kg

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

For similar material(s): LD50, Rat, male and female, > 2,000 mg/kg OECD Test Guideline 402 No deaths occurred at this concentration.

**Bis(2-ethyl-2,5-dimethylhexanoyl)oxy(dimethyl)stannane**

LD50, Rat, > 2,000 mg/kg

**Acute inhalation toxicity**

At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material may cause respiratory irritation. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

As product: The LC50 has not been determined.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilylidyne)trioxime**

The LC50 has not been determined.

**Methyltrichlorosilane treated Silica**

For similar material(s): LC50, Rat, 4 Hour, dust/mist, > 0.477 mg/l

**Silicon dioxide**

Maximum attainable concentration. LC50, Rat, 4 Hour, dust/mist, > 2.08 mg/l No deaths occurred at this concentration.

**3-Aminopropyltriethoxysilane**

Based on product testing: LC50, Rat, male, 6 Hour, vapour, > 5 ppm No deaths occurred at this concentration.

Based on product testing: LC50, Rat, female, 6 Hour, vapour, > 16 ppm No deaths occurred at this concentration.

Based on product testing: LC50, Rat, male and female, 4 Hour, Aerosol, > 7.35 mg/l

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

The LC50 has not been determined.

**Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane**

As product: The LC50 has not been determined.

**Skin corrosion/irritation**

Based on information for component(s):

Brief contact may cause moderate skin irritation with local redness.

May cause drying and flaking of the skin.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilylidyne)trioxime**

Brief contact may cause slight skin irritation with local redness.

**Methyltrichlorosilane treated Silica**

Brief contact is essentially nonirritating to skin.

May cause skin irritation due to mechanical abrasion.

**Silicon dioxide**

Brief contact is essentially nonirritating to skin.

May cause skin irritation due to mechanical abrasion.

May cause drying and flaking of the skin.

**3-Aminopropyltriethoxysilane**

Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness and tissue damage.

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

For similar material(s):

Brief contact may cause slight skin irritation with local redness.

**Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane**

Brief contact may cause skin irritation with local redness.

**Serious eye damage/eye irritation**

Based on information for component(s):

May cause moderate eye irritation.

May cause corneal injury.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilylidyne)trioxime**

May cause slight eye irritation.  
May cause slight corneal injury.

**Methyltrichlorosilane treated Silica**

Essentially nonirritating to eyes.  
Solid or dust may cause irritation or corneal injury due to mechanical action.

**Silicon dioxide**

Solid or dust may cause irritation or corneal injury due to mechanical action.

**3-Aminopropyltriethoxysilane**

May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.  
Vapor or mist may cause eye irritation.

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

For similar material(s):  
May cause slight eye irritation.

**Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane**

May cause slight eye irritation.  
May cause slight temporary corneal injury.

**Sensitization**

For skin sensitization:

Contains component(s) which have demonstrated the potential for contact allergy in mice.  
Contains component(s) which have caused allergic skin sensitization in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilylidyne)trioxime**

For skin sensitization:  
Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**Methyltrichlorosilane treated Silica**

For skin sensitization:  
No relevant data found.

For respiratory sensitization:  
No relevant data found.

**Silicon dioxide**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**3-Aminopropyltriethoxysilane**

For skin sensitization:  
Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

For skin sensitization:  
For similar material(s):  
Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization:  
No relevant data found.

**Bis(2-ethyl-2,5-dimethylhexanoyl)oxy(dimethyl)stannane**

Has caused allergic skin reactions when tested 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.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilyldi)trioxime**

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

**Methyltrichlorosilane treated Silica**

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

**Silicon dioxide**

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

**3-Aminopropyltriethoxysilane**

Material is corrosive. Material is not classified as a respiratory irritant; however, upper respiratory tract irritation or corrosivity may be expected.

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

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

**Bis(2-ethyl-2,5-dimethylhexanoyl)oxy(dimethyl)stannane**

Available data are inadequate to determine single exposure specific target organ toxicity.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilylidyne)trioxime**

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

**Methyltrichlorosilane treated Silica**

Based on physical properties, not likely to be an aspiration hazard.

**Silicon dioxide**

Based on physical properties, not likely to be an aspiration hazard.

**3-Aminopropyltriethoxysilane**

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

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

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

**Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane**

Based on physical properties, not likely to be an aspiration hazard.

**Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)**

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

Contains component(s) which have been reported to cause effects on the following organs in animals:  
Liver.

Blood

Contains an additional component(s) that is not expected to be bioavailable due to the physical state of the material under normal handling and processing conditions.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilylidyne)trioxime**

For similar material(s):

In animals, effects have been reported on the following organs:

Blood

**Methyltrichlorosilane treated Silica**

For similar material(s):

In animals, effects have been reported on the following organs:

Liver

These effects were only observed at exaggerated doses.

Due to the physical state of the material, this component is not expected to be bioavailable under normal handling and processing conditions.

**Silicon dioxide**

No relevant data found.

**3-Aminopropyltriethoxysilane**

In animals, effects have been reported on the following organs:

Liver.

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

For similar material(s):

In animals, effects have been reported on the following organs:  
Blood

**Bis(2-ethyl-2,5-dimethylhexanoyl)oxy(dimethyl)stannane**

In animals, effects have been reported on the following organs:

Blood  
Kidney  
Liver  
Immune system.

**Carcinogenicity**

During use of the material, small amounts of methylethylketoxime (MEKO) will be released. Rodents exposed to chronic MEKO inhalation throughout their lifetimes showed significant increases in liver tumour rates.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilyldi)trioxime**

No relevant data found.

**Methyltrichlorosilane treated Silica**

For similar material(s): Did not cause cancer in laboratory animals.

**Silicon dioxide**

No relevant data found.

**3-Aminopropyltriethoxysilane**

Did not cause cancer in laboratory animals.

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

No relevant data found.

**Bis(2-ethyl-2,5-dimethylhexanoyl)oxy(dimethyl)stannane**

No relevant data found.

**Teratogenicity**

Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilyldi)trioxime**

For similar material(s): Did not cause birth defects or any other fetal effects in laboratory animals.

**Methyltrichlorosilane treated Silica**

No relevant data found.

**Silicon dioxide**

No relevant data found.

**3-Aminopropyltriethoxysilane**

Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

For similar material(s): Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

**Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane**

No relevant data found.

**Reproductive toxicity**

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

**Information for components:**

**2-Butanone, O,O',O''-(methylsilyldiyl)trioxime**

For similar material(s): In animal studies, did not interfere with reproduction.

**Methyltrichlorosilane treated Silica**

For similar material(s): In animal studies, did not interfere with reproduction.

**Silicon dioxide**

No relevant data found.

**3-Aminopropyltriethoxysilane**

In animal studies, did not interfere with fertility.

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

For similar material(s): In animal studies, did not interfere with fertility. In animal studies, did not interfere with reproduction.

**Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane**

No relevant data found.

**Mutagenicity**

In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity studies in animals were negative for component(s) tested.

**Information for components:**

**2-Butanone, O,O',O''-(methylsilyldiyl)trioxime**

For similar material(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Methyltrichlorosilane treated Silica**

For similar material(s): In vitro genetic toxicity studies were negative.

**Silicon dioxide**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**3-Aminopropyltriethoxysilane**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

For similar material(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Bis(2-ethyl-2,5-dimethylhexanoyl)oxy(dimethyl)stannane**

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

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## **SECTION 12: ECOLOGICAL INFORMATION**

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

### **Ecotoxicity**

#### **2-Butanone, O,O',O''-(methylsilylidyne)trioxime**

##### **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).

For similar material(s):

LC50, Fathead minnow (*Pimephales promelas*), Static, 96 Hour, 843 mg/l, OECD Test Guideline 203

For similar material(s):

LC50, *Oryzias latipes* (Japanese medaka), Static, 96 Hour, > 100 mg/l, OECD Test Guideline 203

##### **Acute toxicity to aquatic invertebrates**

For similar material(s):

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 201 mg/l, OECD Test Guideline 202

##### **Acute toxicity to algae/aquatic plants**

For similar material(s):

NOEC, *Selenastrum capricornutum* (green algae), Static, 72 Hour, Growth rate, 2.6 mg/l, OECD Test Guideline 201

For similar material(s):

EC50, *Selenastrum capricornutum* (green algae), Static, 72 Hour, Growth rate, 16 mg/l, OECD Test Guideline 201

##### **Toxicity to bacteria**

For similar material(s):

EC50, activated sludge, 3 Hour, Respiration rates., > 390.45 mg/l, OECD Test Guideline 209

##### **Chronic toxicity to fish**

For similar material(s):

NOEC, *Oryzias latipes* (Orange-red killifish), flow-through test, 14 d, mortality, 50 mg/l

##### **Chronic toxicity to aquatic invertebrates**

For similar material(s):

NOEC, *Daphnia magna*, semi-static test, 21 d, number of offspring, > 100 mg/l

#### **Methyltrichlorosilane treated Silica**

##### **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).

For similar material(s):

LC50, zebra fish (*Brachydanio rerio*), 96 Hour, > 1,000 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

For similar material(s):

EC50, *Daphnia magna* (Water flea), 24 Hour, > 1,000 mg/l, OECD Test Guideline 202

**Silicon dioxide**

**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, 5,000 - 10,000 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), 24 Hour, > 1,000 mg/l

**Acute toxicity to algae/aquatic plants**

EC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Biomass, 440 mg/l

**3-Aminopropyltriethoxysilane**

**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), semi-static test, 96 Hour, > 934 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 331 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, *Desmodesmus subspicatus* (green algae), static test, 72 Hour, Growth rate inhibition, > 1,000 mg/l

NOEC, *Desmodesmus subspicatus* (green algae), static test, 72 Hour, Growth rate inhibition, 1.3 mg/l

**Toxicity to bacteria**

EC50, *Pseudomonas putida*, 5.75 Hour, Respiration rates., 43 mg/l

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

**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).

For the hydrolysis product(s)

LC50, *Oncorhynchus mykiss* (rainbow trout), Static, 96 Hour, > 120 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

For the hydrolysis product(s)

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, > 120 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

For the hydrolysis product(s)

EC50, Selenastrum capricornutum (green algae), Static, 72 Hour, Growth rate, 94 mg/l, OECD Test Guideline 201

For the hydrolysis product(s)

NOEC, Selenastrum capricornutum (green algae), Static, 72 Hour, Growth rate, 30 mg/l, OECD Test Guideline 201

**Chronic toxicity to fish**

For similar material(s):

NOEC, Oryzias latipes (Orange-red killifish), flow-through test, 14 d, 50 mg/l

**Chronic toxicity to aquatic invertebrates**

For similar material(s):

NOEC, Daphnia magna, semi-static test, 21 d, > 100 mg/l

**Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane**

**Acute toxicity to fish**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

For similar material(s):

LC50, Zebra fish (Danio/Brachydanio rerio), semi-static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna, static test, 48 Hour, 39 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, Algae (Scenedesmus subspicatus), Growth rate, 72 Hour, Growth rate, 7.6 mg/l, OECD Test Guideline 201 or Equivalent

For similar material(s):

NOEC, Algae (Scenedesmus subspicatus), Growth rate, 72 Hour, Growth rate, 1.1 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

For similar material(s):

EC50, Bacteria, 3 Hour, Respiration rates., 14 mg/l

**Persistence and degradability**

**2-Butanone, O,O',O''-(methylsilyldiyl)trioxime**

**Biodegradability:** Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10-day Window: Fail

**Biodegradation:** 20 - 28 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301C or Equivalent

**Methyltrichlorosilane treated Silica**

**Biodegradability:** Biodegradation is not applicable.

**Silicon dioxide**

**Biodegradability:** Biodegradation is not applicable.

**3-Aminopropyltriethoxysilane**

**Biodegradability:** Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10-day Window: Fail

**Biodegradation:** 67 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301A or Equivalent

**Stability in Water (1/2-life)**

Hydrolysis, half-life, 8.5 Hour, pH 7, Half-life Temperature 24.7 °C

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

**Biodegradability:** For similar material(s): This material rapidly hydrolyzes to products that are either readily or ultimately biodegradable.

10-day Window: Fail

**Biodegradation:** 0 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301A

**Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane**

**Biodegradability:** For similar material(s): Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

For similar material(s): 10-day Window: Fail

**Biodegradation:** 3 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

**Bioaccumulative potential**

**2-Butanone, O,O',O''-(methylsilyldiyl)trioxime**

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

**Partition coefficient: n-octanol/water(log Pow):** 1.69 Estimated by Structure-Activity Relationship (SAR).

**Methyltrichlorosilane treated Silica**

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

**Silicon dioxide**

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

**Partition coefficient: n-octanol/water(log Pow):** 0.53

**Bioconcentration factor (BCF):** 3.16

**3-Aminopropyltriethoxysilane**

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

**Partition coefficient: n-octanol/water(log Pow):** 1.7 at 20 °C Calculated.

**Bioconcentration factor (BCF):** 3.4 Cyprinus carpio (Carp) 56 d

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

**Bioaccumulation:** For similar material(s): Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

**Partition coefficient: n-octanol/water(log Pow):** 11.2

**Bis(2-ethyl-2,5-dimethylhexanoyl)oxy(dimethyl)stannane**

**Bioaccumulation:** No relevant data found.

**Mobility in Soil**

**2-Butanone, O,O',O''-(methylsilyldi)trioxime**

No relevant data found.

**Methyltrichlorosilane treated Silica**

No relevant data found.

**Silicon dioxide**

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

**Partition coefficient (Koc):** 21.73

**3-Aminopropyltriethoxysilane**

No relevant data found.

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

No relevant data found.

**Bis(2-ethyl-2,5-dimethylhexanoyl)oxy(dimethyl)stannane**

No relevant data found.

**Results of PBT and vPvB assessment**

**2-Butanone, O,O',O''-(methylsilyldi)trioxime**

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

**Methyltrichlorosilane treated Silica**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Silicon dioxide**

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

**3-Aminopropyltriethoxysilane**

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

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Bis(2-ethyl-2,5-dimethylhexanoyl)oxy(dimethyl)stannane**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Other adverse effects**

**2-Butanone, O,O',O''-(methylsilylydyne)trioxime**

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

**Methyltrichlorosilane treated Silica**

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

**Silicon dioxide**

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

**3-Aminopropyltriethoxysilane**

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

**Methyltri(ethylmethylketoxime)silane isomers and oligomers**

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

**Bis[(2-ethyl-2,5-dimethylhexanoyl)oxy](dimethyl)stannane**

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

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## **SECTION 13: DISPOSAL CONSIDERATIONS**

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**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 INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. 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.

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## **SECTION 14: TRANSPORT INFORMATION**

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ADG

Not regulated for transport

**Classification for SEA transport (IMO-IMDG):**

Not regulated for transport

**Transport in bulk  
according to Annex I or II  
of MARPOL 73/78 and the**

Consult IMO regulations before transporting ocean bulk

**IBC or IGC Code**

**Classification for AIR transport (IATA/ICAO):**

Not regulated for transport

**Hazchem Code**

None Allocated

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 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.

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**SECTION 15: REGULATORY INFORMATION**

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**Poison Schedule**

Not Scheduled

**Australia Inventory of Chemical Substances (AICS)**

The product contains an intentional component that is subject to a restriction. Production and/or use is limited by the conditions of the restriction.

Prohibition/Licensing Requirements : Refer to model WHS Act and Regulations for prohibition, authorisation and restricted use.

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**SECTION 16: ANY OTHER RELEVANT INFORMATION**

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**Revision**

Identification Number: 4018248 / A142 / Issue Date: 09.10.2020 / Version: 5.0

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)
AU OEL	Australia. Workplace Exposure Standards for Airborne Contaminants.
Dow IHG	Dow Industrial Hygiene Guideline
STEL	Exposure standard - short term exposure limit
TWA	Time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; AIIC - Australian Inventory of Industrial Chemicals; 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; 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

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