SAFETY DATA SHEET

DOW PERFORMANCE MATERIALS (AUSTRALIA) PTY LTD

Product name: DOWSIL™ 680 Sanitary Sealant White

Issue Date: 10.05.2019
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DOW PERFORMANCE MATERIALS (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.

SECTION 1: IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product name: DOWSIL™ 680 Sanitary Sealant White

Recommended use of the chemical and restrictions on use
Identified uses: Construction materials and additives Adhesive, binding agents

COMPANY IDENTIFICATION
DOW PERFORMANCE MATERIALS
(AUSTRALIA) PTY LTD
LEVEL 29, 367 COLLINS STREET
MELBOURNE VIC 3000
AUSTRALIA

Customer Information Number: 1300-136-468
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

SECTION 2: HAZARD(S) IDENTIFICATION

GHS Classification
Serious eye damage/eye irritation - Category 2A
Skin sensitisation - Category 1
Short-term (acute) aquatic hazard - Category 3
Long-term (chronic) aquatic hazard - Category 3

GHS label elements
Hazard pictograms

Signal word: **WARNING!**

Hazard statements
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful to aquatic life with long lasting effects.

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.
Avoid release to the environment.
Wear protective gloves/ eye protection/ face protection.

Response
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Wash contaminated clothing before reuse.

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

Other hazards
No data available

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

This product is a mixture.

Component	CASRN	Concentration
Silicon dioxide	7631-86-9	>= 1.0 - < 10.0 %
2-Butanone, O,O',O''-(methylsilylidyne)trioxime	22984-54-9	>= 2.5 - < 10.0 %
Distillates (petroleum),	64742-46-7	>= 1.0 - < 10.0 %

hydrotreated middle		
Vinyltri (methylethylketoxime) silane	2224-33-1	>= 1.0 - < 3.0 %
3-Aminopropyltriethoxysilane	919-30-2	>= 0.1 - < 1.0 %
Titanium dioxide	13463-67-7	>= 0.1 - < 1.0 %
Methyltri(ethylmethylketoxime)silane isomers and oligomers	Not available	>= 0.1 - < 1.0 %
Propiconazole	60207-90-1	>= 0.25 - < 1.0 %

SECTION 4: FIRST AID MEASURES

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; if effects occur, consult a physician.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

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.

Indication of any immediate medical attention and special treatment needed
Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIREFIGHTING MEASURES

Hazchem Code

None Allocated

Extinguishing media

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

Unsuitable extinguishing media: None known..

Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon oxides. Silicon oxides. Nitrogen oxides (NOx).

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

Advice for firefighters

Fire Fighting Procedures: 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.. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage..
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: In the event of fire, wear self-contained breathing apparatus.. Use personal protective equipment..

SECTION 6: ACCIDENTAL RELEASE MEASURES

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: Do not release the product to the aquatic environment above defined regulatory levels 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, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. 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.
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/Notation
Silicon dioxide	Dow IHG	TWA Respirable fraction.	0.2 mg/m3
	AU OEL	TWA Respirable dust	2 mg/m3
Distillates (petroleum), hydrotreated middle	AU OEL	TWA Mist	5 mg/m3
3-Aminopropyltriethoxysilane	Dow IHG	TWA	0.5 mg/m3
Titanium dioxide	Dow IHG	TWA	2.4 mg/m3
	ACGIH	TWA	10 mg/m3 , Titanium dioxide
	AU OEL	TWA	10 mg/m3
Methyl Ethyl Ketoxime	US WEEL	TWA	10 ppm
	US WEEL	TWA	Skin Sensitizer
	Dow IHG	TWA	0.15 ppm
	Dow IHG	TWA	Skin Sensitizer

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

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 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: Organic vapor 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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	paste
Color	white
Odor	slight
Odor Threshold	No data available
pH	Not applicable
Melting point/range	No data available

Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	0.985
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Molecular weight	No data available
Particle size	No data available

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

SECTION 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.

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

Incompatible materials: Oxidizing agents

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

SECTION 11: TOXICOLOGICAL INFORMATION

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

Acute toxicity

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

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

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.

As product: The dermal LD50 has not been determined.

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

Acute inhalation toxicity
Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.
As product: The LC50 has not been determined.

Skin corrosion/irritation
Prolonged exposure not likely to cause significant skin irritation.

Serious eye damage/eye irritation
May cause slight temporary eye irritation.
Corneal injury is unlikely.
May cause mild eye discomfort.

Sensitization
For skin sensitization:
Contains component(s) which have demonstrated the potential for contact allergy in mice.

For respiratory sensitization:
No relevant information found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Contains component(s) which have been reported to cause effects on the following organs in animals:
Blood.

Contains an additional component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

Carcinogenicity
For this family of materials: Did not cause cancer in long-term animal studies which used routes of exposure considered relevant to industrial handling. Positiveresults have been reported in other studies using routes of exposure not relevant to industrial handling. 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.

Contains an additional component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

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

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

Mutagenicity
Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies.

Contains an additional component(s) that is/are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

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

COMPONENTS INFLUENCING TOXICOLOGY:

Silicon dioxide

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

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

Acute inhalation toxicity
The LC50 has not been determined.

Distillates (petroleum), hydrotreated middle

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 5.2 mg/l

Vinyltri (methylethylketoxime) silane

Acute inhalation toxicity
The LC50 has not been determined.

3-Aminopropyltriethoxysilane

Acute inhalation toxicity
LC50, Rat, male, 6 Hour, vapour, > 5 ppm No deaths occurred at this concentration.

LC50, Rat, female, 6 Hour, vapour, > 16 ppm No deaths occurred at this concentration.

LC50, Rat, male and female, 4 Hour, Aerosol, > 7.35 mg/l

Titanium dioxide

Acute inhalation toxicity
LC50, Rat, male, 4 Hour, dust/mist, > 6.82 mg/l No deaths occurred at this concentration.

Methyltri(ethylmethylketoxime)silane isomers and oligomers

Acute inhalation toxicity
The LC50 has not been determined.

Propiconazole

Acute inhalation toxicity
LC50, Rat, 4 Hour, dust/mist, > 5.8 mg/l

SECTION 12: ECOLOGICAL INFORMATION

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

Ecotoxicity

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

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

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna, semi-static test, 21 d, > 100 mg/l

Distillates (petroleum), hydrotreated middle

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).
LL50, Scophthalmus maximus (turbot), 96 Hour, > 1,028 mg/l, Test substance: Water Accommodated Fraction

Acute toxicity to aquatic invertebrates
LL50, Acartia tonsa, 48 Hour, > 3,193 mg/l, Test substance: Water Accommodated Fraction

Acute toxicity to algae/aquatic plants
EL50, Skeletonema costatum (marine diatom), 72 Hour, > 10,000 mg/l, Test substance: Water Accommodated Fraction

Toxicity to bacteria
EC50, 3 Hour, > 100 mg/l, OECD Test Guideline 209

Chronic toxicity to aquatic invertebrates
NOELR, Ceriodaphnia dubia (water flea), 8 d, > 100 mg/l, Test substance: Water Accommodated Fraction

Vinyltri (methylethylketoxime) 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, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 120 mg/l, OECD Test Guideline 203
LC50, Oryzias latipes (Orange-red killifish), 96 Hour, > 100 mg/l, OECD Test Guideline 203

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

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, 331 mg/l

Acute toxicity to algae/aquatic plants
ErC50, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, > 1,000 mg/l

Toxicity to bacteria
EC50, Pseudomonas putida, Respiration inhibition, 5.75 Hour, 43 mg/l

Titanium 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).
NOEC mortality, Leuciscus idus (Golden orfe), static test, 48 Hour, > 1,000 mg/l

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), static test, 48 Hour, > 1,000 mg/l

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 100 mg/l, OECD Test Guideline 201

Toxicity to bacteria
EC50, 3 Hour, > 1,000 mg/l, OECD Test Guideline 209

Methyltri(ethylmethylketoxime)silane isomers and oligomers

Acute toxicity to fish
No relevant data found.

Propiconazole

Acute toxicity to fish
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
LC50, Leuciscus idus (Golden orfe), 96 Hour, 5.1 mg/l
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, 0.83 - 506 mg/l
LC50, Cyprinus carpio (Carp), 96 Hour, 5.7 - 46 mg/l

Acute toxicity to aquatic invertebrates
LC50, saltwater mysid Mysidopsis bahia, 96 Hour, 0.5 mg/l, Method Not Specified.
LC50, scud Gammarus sp., flow-through test, 96 Hour, 1.3 mg/l, Method Not Specified.
EC50, Daphnia magna (Water flea), 48 Hour, 10.2 mg/l, Method Not Specified.

Acute toxicity to algae/aquatic plants
EC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, 0.57 mg/l
EC50, diatom Navicula sp., 11 d, 0.093 mg/l

Chronic toxicity to fish
NOEC, Cyprinodon variegatus (sheepshead minnow), 100 d, 0.068 mg/l

Chronic toxicity to aquatic invertebrates
NOEC, Daphnia magna (Water flea), 21 d, 0.31 mg/l

Toxicity to Above Ground Organisms
Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg).
Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).
oral LD50, Coturnix japonica (Japanese quail), 1,777 - 2,223 mg/kg
dietary LC50, Anas platyrhynchos (Mallard duck), 8 d, > 5,620 ppm
contact LD50, Apis mellifera (bees), > 100micrograms/bee
oral LD50, Apis mellifera (bees), > 100micrograms/bee

Persistence and degradability

Silicon dioxide

Biodegradability: Biodegradation is not applicable.

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

Biodegradability: Based on information for a similar material: 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

Distillates (petroleum), hydrotreated middle

Biodegradability: Material is expected to be readily biodegradable.
10-day Window: Not applicable
Biodegradation: 74 %
Exposure time: 28 d
Method: OECD Test Guideline 306

Vinyltri (methylethylketoxime) silane

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301A

Stability in Water (1/2-life)
, DT50, < 1 min, Half-life Temperature 2 °C, OECD Test Guideline 111

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

Titanium dioxide

Biodegradability: Biodegradation is not applicable.

Methyltri(ethylmethylketoxime)silane isomers and oligomers

Biodegradability: No relevant data found.

Propiconazole

Biodegradability: No relevant information found.

Theoretical Oxygen Demand: 2.01 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitization: OH radicals
Atmospheric half-life: 5.533 Hour
Method: Estimated.

Bioaccumulative potential

Silicon dioxide

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

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

Bioaccumulation: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).
Partition coefficient: n-octanol/water(log Pow): 11.2

Distillates (petroleum), hydrotreated middle
Bioaccumulation: No relevant data found.

Vinyltri (methylethylketoxime) silane
Bioaccumulation: No relevant data found.

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: No relevant data found.

Propiconazole
Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient: n-octanol/water(log Pow): 3.72 Measured
Bioconcentration factor (BCF): 116 Lepomis macrochirus (Bluegill sunfish) 14 d

Mobility in Soil

Silicon dioxide
No relevant data found.

2-Butanone, O,O',O"-(methylsilylidyne)trioxime
No relevant data found.

Distillates (petroleum), hydrotreated middle
No relevant data found.

Vinyltri (methylethylketoxime) silane
No relevant data found.

3-Aminopropyltriethoxysilane
No relevant data found.

Methyltri(ethylmethylketoxime)silane isomers and oligomers
No relevant data found.

Propiconazole
Potential for mobility in soil is medium (Koc between 150 and 500).
Partition coefficient (Koc): 382 - 1789 Measured

Results of PBT and vPvB assessment

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

2-Butanone, O,O',O"-(methylsilylidyne)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).

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

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

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).

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

Methyltri(ethylmethylketoxime)silane isomers and oligomers
This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

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

Other adverse effects

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

2-Butanone, O,O',O''-(methylsilylidyne)trioxime
This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Distillates (petroleum), hydrotreated middle
This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Vinyltri (methylethylketoxime) silane
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.

Titanium dioxide
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.

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

SECTION 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 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 Section10 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.

SECTION 14: TRANSPORT INFORMATION

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 IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

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.

SECTION 15: REGULATORY INFORMATION

Poison Schedule
S5

Product repackaged for public consumer use should be labelled in accordance with the current Standard for the Uniform Scheduling of Medicines and Poisons.

Australia Inventory of Chemical Substances (AICS)
All ingredients in this preparation are listed in the Australian Inventory of Chemical Substances, AICS, or are exempt.

Prohibition/Licensing Requirements : There is no applicable prohibition or notification/licensing requirements, including for carcinogens under Commonwealth, State or Territory legislation.

SECTION 16: ANY OTHER RELEVANT INFORMATION

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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
TWA	Time weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

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

DOW PERFORMANCE MATERIALS (AUSTRALIA) PTY LTD 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.
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