

SAFETY DATA SHEET

DOW CORNING(R) 688 GLAZING AND CLADDING SEALANT BLACK

DOW CORNING

Version 2.1 Revision Date: 23.04.2016 SDS Number: 1099574-00004 Date of last issue: 30.09.2015
Date of first issue: 13.01.2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DOW CORNING(R) 688 GLAZING AND CLADDING SEALANT BLACK

Product code : 00000000004063592

Manufacturer or supplier's details

Company : Dow Corning Australia Pty Ltd, ABN 36 008 444 166

Address : **Darling Park, Tower 2
Level 20, 201 Sussex Street
Sydney. NSW 2000**

**Locked Bag 2095
North Ryde, NSW 1670**

Telephone : 1300-369-745

Emergency telephone number : **1300-360-732 (24 Hours)**

Telefax : 1300-650-785

Recommended use of the chemical and restrictions on use

Recommended use : Adhesive, binding agents

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitisation : Category 1

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.

Response:

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P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : Silicone Sealant

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Limestone	1317-65-3	>= 30 - < 60
Silicon dioxide	7631-86-9	< 10
Methyltri(ethylmethylketoxime)silane	22984-54-9	< 10
Distillates (petroleum), hydrotreated middle	64742-46-7	< 10
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	< 10
Quartz	14808-60-7	< 10
Methyltri(ethylmethylketoxime)silane isomers and oligomers	Not Assigned	< 10
Vinyltri (methylethylketoxime) silane	2224-33-1	< 10
Oligomers of aminoalkylmethoxysilanes	Not Assigned	< 10
Ethyl methyl ketoxime	96-29-7	< 10
Dimethylbis[(1-oxoneodecyl)oxy]stannane	68928-76-7	< 10

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

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- Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- Notes to physician : Treat symptomatically and supportively.
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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
Metal oxides
Silicon oxides
Formaldehyde
Nitrogen oxides (NO_x)
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
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.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : 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.
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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 : Soak up with inert absorbent material.
 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. Clean up remaining materials from spill with suitable absorbent.
 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.
 Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing.
 Do not swallow.
 Avoid contact with eyes.
 Handle in accordance with good industrial hygiene and safety practice.
 Keep away from water.
 Protect from moisture.
 Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
 When using do not eat, drink or smoke.
 Wash contaminated clothing before re-use.
 These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

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

Materials to avoid : Do not store with the following product types:
 Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis
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		(Form of exposure)	ters / Permissible concentration	
Limestone	1317-65-3	TWA	10 mg/m3 (Calcium carbonate)	AU OEL
Further information: This value is for inhalable dust containing no asbestos and < 1% crystalline silica				
Silicon dioxide	7631-86-9	TWA (Respirable dust)	2 mg/m3	AU OEL
Distillates (petroleum), hydrotreated middle	64742-46-7	TWA (Mist)	5 mg/m3	AU OEL
Quartz	14808-60-7	TWA (Respirable dust)	0.1 mg/m3	AU OEL
		TWA (Respirable fraction)	0.025 mg/m3 (Silica)	ACGIH
Dimethylbis[(1-oxoodecyl)oxy]stannane	68928-76-7	TWA	0.1 mg/m3 (Tin)	AU OEL
Further information: Some compounds in these groups are classified as carcinogenic or as sensitizers. Check individual classification details on the safety data sheet for information on classification., Skin absorption				
		STEL	0.2 mg/m3 (Tin)	AU OEL
Further information: Some compounds in these groups are classified as carcinogenic or as sensitizers. Check individual classification details on the safety data sheet for information on classification., Skin absorption				
		TWA	0.1 mg/m3 (Tin)	ACGIH
		STEL	0.2 mg/m3 (Tin)	ACGIH

Engineering measures : Processing may form hazardous compounds (see section 10).
 Ensure adequate ventilation, especially in confined areas.
 Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Combined particulates and organic vapour type

Hand protection
 Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to

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chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

- Eye protection : Wear the following personal protective equipment:
Safety goggles
- Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
-

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : paste
- Colour : black
- Odour : slight
- Odour Threshold : No data available
- pH : Not applicable
- Melting point/freezing point : No data available
- Initial boiling point and boiling range : Not applicable
- Flash point : Not applicable
- Evaporation rate : Not applicable
- Flammability (solid, gas) : Not classified as a flammability hazard
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : Not applicable
- Relative vapour density : No data available
- Relative density : 1.38
- Solubility(ies)
Water solubility : No data available
- Partition coefficient: n-octanol/water : No data available
- Auto-ignition temperature : No data available

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Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : Not applicable

Explosive properties : Not explosive

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

Molecular weight : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Use at elevated temperatures may form highly hazardous compounds.
Can react with strong oxidizing agents.
Hazardous decomposition products will be formed upon contact with water or humid air.
Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid : Exposure to moisture

Incompatible materials : Oxidizing agents
Water

Hazardous decomposition products

Contact with water or humid air : Ethyl methyl ketoxime

Thermal decomposition : Formaldehyde

SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes : Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Components:

Limestone:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

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Silicon dioxide:

- Acute oral toxicity : LD50 (Rat): > 3,300 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Information taken from reference works and the literature.
- Acute inhalation toxicity : LC50 (Rat): > 2.08 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Information taken from reference works and the literature.
- Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Information taken from reference works and the literature.

Methyltri(ethylmethylketoxime)silane:

- Acute oral toxicity : LD50 (Rat): > 2,520 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on test data

Distillates (petroleum), hydrotreated middle:

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
- Acute inhalation toxicity : LC50 (Rat): > 5,000 mg/m³
Exposure time: 4 h
Test atmosphere: vapour
- Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

N-(3-(Trimethoxysilyl)propyl)ethylenediamine:

- Acute oral toxicity : LD50 (Rat): 2,295 mg/kg
Remarks: Based on test data
- Acute inhalation toxicity : LC50 (Rat): > 1.49 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Remarks: Based on test data
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on test data

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Quartz:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Vinyltri (methylethylketoxime) silane:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on test data

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on test data

Ethyl methyl ketoxime:

Acute oral toxicity : LD50 (Rat): 2,326 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 4.83 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 1,000 - 1,800 mg/kg

Dimethylbis[(1-oxoneodecyl)oxy]stannane:

Acute oral toxicity : LD50 (Rat): 894 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified based on available information.

Components:

Silicon dioxide:

Result: No skin irritation
Remarks: Information taken from reference works and the literature.

Methyltri(ethylmethylketoxime)silane:

Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated middle:

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Assessment: Repeated exposure may cause skin dryness or cracking.

N-(3-(Trimethoxysilyl)propyl)ethylenediamine:

Species: Rabbit
Result: Mild skin irritation
Remarks: Based on test data

Oligomers of aminoalkylmethoxysilanes:

Species: Rabbit
Result: Mild skin irritation
Remarks: Based on test data

Ethyl methyl ketoxime:

Species: Rabbit
Result: No skin irritation

Dimethylbis[(1-oxoneodecyl)oxy]stannane:

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Silicon dioxide:

Result: No eye irritation
Remarks: Information taken from reference works and the literature.

Methyltri(ethylmethylketoxime)silane:

Species: Rabbit
Result: Irritation to eyes, reversing within 7 days
Remarks: Based on test data

Distillates (petroleum), hydrotreated middle:

Result: No eye irritation

N-(3-(Trimethoxysilyl)propyl)ethylenediamine:

Species: Rabbit
Result: Irreversible effects on the eye
Remarks: Based on test data

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Species: Rabbit
Result: Irritation to eyes, reversing within 7 days
Remarks: Based on data from similar materials

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Vinyltri (methylethylketoxime) silane:

Species: Rabbit
Result: Irreversible effects on the eye
Remarks: Based on test data

Oligomers of aminoalkylmethoxysilanes:

Species: Rabbit
Result: Irreversible effects on the eye
Remarks: Based on test data

Ethyl methyl ketoxime:

Species: Rabbit
Result: Irreversible effects on the eye
Method: OECD Test Guideline 405

Dimethylbis[(1-oxoneodecyl)oxy]stannane:

Species: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

Silicon dioxide:

Assessment: Does not cause skin sensitisation.

Test Type: Skin: test type not specified

Species: Guinea pig

Remarks: Information taken from reference works and the literature.

Methyltri(ethylmethylketoxime)silane:

Assessment: Probability or evidence of skin sensitisation in humans

Test Type: Maximisation Test

Species: Guinea pig

Remarks: Based on test data

Distillates (petroleum), hydrotreated middle:

Test Type: Human repeat insult patch test (HRIPT)

Exposure routes: Skin contact

Result: negative

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Remarks: Information taken from reference works and the literature.

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Methyltri(ethylmethylketoxime)silane:

Genotoxicity in vitro : Test Type: Mutagenicity (in vitro mammalian cytogenetic test)
Result: negative
Remarks: Based on test data

Distillates (petroleum), hydrotreated middle:

Genotoxicity in vitro : Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: negative

Vinyltri (methylethylketoxime) silane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on test data

Genotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative
Remarks: Based on test data

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Ethyl methyl ketoxime:

Genotoxicity in vitro : Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Ingestion
Result: negative

Dimethylbis[(1-oxoneodecyl)oxy]stannane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Carcinogenicity

Not classified based on available information.

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Components:

Quartz:

Species: Humans

Application Route: inhalation (dust/mist/fume)

Result: positive

Remarks: IARC (International Agency for Research on Cancer)

The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Carcinogenicity - Assessment : Positive evidence from human epidemiological studies (inhalation)

Ethyl methyl ketoxime:

Species: Rat

Application Route: inhalation (vapour)

Exposure time: 26 Months

Result: positive

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Not classified based on available information.

Components:

Methyltri(ethylmethylketoxime)silane:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: Ingestion
Symptoms: No effects on fertility
Remarks: Based on test data

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat, male and female
Application Route: Ingestion
Symptoms: No effects on foetal development
Remarks: Based on test data

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

N-(3-(Trimethoxysilyl)propyl)ethylenediamine:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Application Route: Ingestion
Symptoms: No effects on fertility
Remarks: Based on test data

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the

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ment reproduction/developmental toxicity screening test
Application Route: Ingestion
Symptoms: No effects on foetal development
Remarks: Based on test data

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

Ethyl methyl ketoxime:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

Dimethylbis[(1-oxoneodecyl)oxy]stannane:

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

STOT - single exposure

Not classified based on available information.

Components:

Ethyl methyl ketoxime:

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure

Not classified based on available information.

Components:

Methyltri(ethylmethylketoxime)silane:

Exposure routes: Ingestion
Target Organs: Blood
Assessment: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

N-(3-(Trimethoxysilyl)propyl)ethylenediamine:

Exposure routes: Ingestion
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Quartz:

Exposure routes: inhalation (dust/mist/fume)
Target Organs: Lungs
Assessment: Shown to produce significant health effects in animals at concentrations of 0.02

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mg/l/6h/d or less.

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Exposure routes: Ingestion

Target Organs: Blood

Assessment: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

Vinyltri (methylethylketoxime) silane:

Exposure routes: Ingestion

Target Organs: Blood

Assessment: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

Ethyl methyl ketoxime:

Exposure routes: Ingestion

Target Organs: Blood

Assessment: Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

Exposure routes: inhalation (vapour)

Target Organs: Blood

Assessment: Shown to produce significant health effects in animals at concentrations of 0.2 mg/l/6h/d or less.

Dimethylbis[(1-oxoneodecyl)oxy]stannane:

Exposure routes: Ingestion

Target Organs: Immune system, Central nervous system

Assessment: Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

Repeated dose toxicity

Components:

Methyltri(ethylmethylketoxime)silane:

Species: Rat

Application Route: Ingestion

Target Organs: Blood

Remarks: Based on test data

N-(3-(Trimethoxysilyl)propyl)ethylenediamine:

Application Route: Ingestion

Remarks: Based on test data

Quartz:

Species: Humans

LOAEL: 0.053 mg/m³

Application Route: Inhalation

Remarks: OECD SIDS

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The substance is inextricably bound in the product and therefore does not contribute to a dust inhalation hazard.

Methyltri(ethylmethylketoxime)silane isomers and oligomers:

Species: Rat
Application Route: Ingestion
Target Organs: Blood
Remarks: Based on data from similar materials

Vinyltri (methylethylketoxime) silane:

Species: Rat
Application Route: Ingestion
Target Organs: Blood
Remarks: Based on data from similar materials

Ethyl methyl ketoxime:

Species: Rat
LOAEL: 0.36 mg/l
Application Route: inhalation (vapour)
Exposure time: 28 Days

Species: Rat
NOAEL: 4 mg/l
LOAEL: 20 mg/kg
Application Route: Ingestion
Exposure time: 28 Days

Dimethylbis[(1-oxoneodecyl)oxy]stannane:

Species: Rat
NOAEL: < 1.6 mg/kg
Application Route: Ingestion
Exposure time: 90 Days
Remarks: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Components:

Distillates (petroleum), hydrotreated middle:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Further information

Product:

Remarks: 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.

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Limestone:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 10,000 mg/l
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
- Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 200 mg/l
Exposure time: 72 h

Methyltri(ethylmethylketoxime)silane:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 120 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 120 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials
- Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 94 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Ecotoxicology Assessment

- Acute aquatic toxicity : This product has no known ecotoxicological effects.

Distillates (petroleum), hydrotreated middle:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 87,556 mg/l
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h
- Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): > 1,000 mg/l
Exposure time: 72 h
- Toxicity to fish (Chronic toxicity) : NOELR: > 1,000 mg/l
Exposure time: 28 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: 5 mg/l
Exposure time: 21 d

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Toxicity to bacteria : EC50: > 100 mg/l
Exposure time: 3 h

N-(3-(Trimethoxysilyl)propyl)ethylenediamine:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 597 mg/l
Exposure time: 96 h
Method: Directive 67/548/EEC, Annex V, C.1.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia sp.): 81 mg/l
Exposure time: 48 h
Method: Directive 67/548/EEC, Annex V, C.2.

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 8.8 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Selenastrum capricornutum (green algae)): 3.1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia sp.): > 1 mg/l
Exposure time: 21 d

Toxicity to bacteria : EC50 (Pseudomonas putida): 67 mg/l
Exposure time: 16 h
Method: DIN 38 412 Part 8

Quartz:

Ecotoxicology Assessment

Acute aquatic toxicity : No toxicity at the limit of solubility

Chronic aquatic toxicity : No toxicity at the limit of solubility

Vinyltri (methylethylketoxime) silane:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 120 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

LC50 (Oryzias latipes (Orange-red killifish)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Oligomers of aminoalkylmethoxysilanes:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 597 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia sp.): 37 mg/l
Exposure time: 48 h

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- Remarks: Based on data from similar materials
- Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 8.8 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials
- NOEC (Pseudokirchneriella subcapitata (green algae)): 3.1 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia sp.): > 1 mg/l
Exposure time: 21 d
Remarks: Based on data from similar materials
- Ethyl methyl ketoxime:**
- Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 201 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae : EC50 (Scenedesmus capricornutum (fresh water algae)): 11.8 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- NOEC (Scenedesmus capricornutum (fresh water algae)): 2.56 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
- Toxicity to bacteria : EC50 (Pseudomonas putida): 281 mg/l
Exposure time: 17 h
- Dimethylbis[(1-oxoneodecyl)oxy]stannane:**
- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 17 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

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Toxicity to algae : ErC50 (Desmodesmus subspicatus (green algae)): 37 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

EC10 (Desmodesmus subspicatus (green algae)): 5.7 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Persistence and degradability

Components:

Methyltri(ethylmethylketoxime)silane:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 14.5 %
Exposure time: 21 d
Method: OECD Test Guideline 302B
Remarks: Based on data from similar materials

Distillates (petroleum), hydrotreated middle:

Biodegradability : Result: Inherently biodegradable.

N-(3-(Trimethoxysilyl)propyl)ethylenediamine:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 39 %
Method: OECD Test Guideline 301A

Stability in water : Degradation half life: 0.025 h (24.7 °C) pH: 7
Method: OECD Test Guideline 111

Vinyltri (methylethylketoxime) silane:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301A

Stability in water : Degradation half life: < 1 min (2 °C)
Method: OECD Test Guideline 111

Oligomers of aminoalkylmethoxysilanes:

Biodegradability : Result: Not readily biodegradable.

Ethyl methyl ketoxime:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 27 %
Exposure time: 21 d
Method: OECD Test Guideline 301C

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Dimethylbis[(1-oxoneodecyl)oxy]stannane:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 3 %
Exposure time: 35 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Bioaccumulative potential

Components:

Methyltri(ethylmethylketoxime)silane:

Partition coefficient: n-octanol/water : log Pow: 11.2

N-(3-(Trimethoxysilyl)propyl)ethylenediamine:

Partition coefficient: n-octanol/water : log Pow: -0.3

Ethyl methyl ketoxime:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 0.5 - 0.6
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 0.63

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

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IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

ADG

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

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

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

The components of this product are reported in the following inventories:

KECI : All ingredients listed, exempt or notified.
AICS : All ingredients listed or exempt.
IECSC : All ingredients listed or exempt.
PICCS : All ingredients listed or exempt.
ENCS/ISHL : All components are listed on ENCS/ISHL or exempted from inventory listing.
NZIoC : All ingredients listed or exempt.

SECTION 16. OTHER INFORMATION

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
AU OEL : Australia. Workplace Exposure Standards for Airborne Con-

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taminants.
ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
AU OEL / TWA : Exposure standard - time weighted average
AU OEL / STEL : Exposure standard - short term exposure limit

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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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