

**DOW CORNING(R) 991 SILICONE HI-PERFORMANCE SEALANT - BLACK**

Version 1.0      Revision Date: 2014/11/14      MSDS Number: 753510-00001      Date of last issue: -  
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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : DOW CORNING(R) 991 SILICONE HI-PERFORMANCE SEALANT - BLACK

Product code : 00000000002978288

**Manufacturer or supplier's details**

Company : Dow Corning Singapore Pte Ltd - Philippines Representative Office

Address : Unit 2401 One San Miquel Avenue Condominium  
San Miguel Avenue corner Shaw Boulevard  
Pasig City, 1600 Philippines

Telephone : + (63 2) 635 2798 or + (63 2) 635 2797

Emergency telephone number : + (65) 6542 9595 (24 hours)

Telefax : + (63 2) 634 0128

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

Recommended use : Adhesive, binding agents  
Construction materials and additives

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**2. HAZARDS IDENTIFICATION****GHS Classification**

Skin sensitisation : Category 1

**GHS Label element**

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.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.

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P280 Wear protective gloves.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of water.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

**Disposal:**

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

**Other hazards which do not result in classification**

None known.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Chemical nature : Silicone  
Sealant

**Hazardous components**

Chemical Name	CAS-No.	Concentration (%)
Methyltri(ethylmethylketoxime)silane	22984-54-9	>= 1 - < 10
Methyltrimethoxysilane	1185-55-3	>= 0.1 - < 1
Methyltri(ethylmethylketoxime)silane isomers and oligomers	Not Assigned	>= 0.1 - < 1
Vinyltri (methylethylketoxime) silane	2224-33-1	>= 0.1 - < 1
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	>= 0.1 - < 1
Ethyl methyl ketoxime	96-29-7	>= 0.1 - < 1

**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 if symptoms occur.

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.



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- In case of eye contact : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention if symptoms occur.  
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.

**5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Dry chemical  
Carbon dioxide (CO2)
- 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  
Silicon oxides  
Formaldehyde  
Metal oxides  
Nitrogen oxides (NOx)
- 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.

**6. ACCIDENTAL RELEASE MEASURES**

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- 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.  
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.

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**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.
  
- 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

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Methyltrimethoxysilane	1185-55-3	TWA	50 ppm	DCC OEL
Ethyl methyl ketoxime	96-29-7	TWA	10 ppm	DCC OEL
Further information: Skin sensitisation				

#### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethyl methyl ketoxime	96-29-7	TWA	10 ppm	DCC OEL
Further information: Skin sensitisation				

**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** : Impervious 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 chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of work-day.

**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).

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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.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: paste
Colour	: black
Odour	: characteristic
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	: 1.31
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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Thermal decomposition	:	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

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**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. Methyl alcohol is formed upon contact with water or humid air. 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

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**11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure	:	Skin contact Ingestion Eye contact
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**Acute toxicity**

Not classified based on available information.

**Components:****Methyltri(ethylmethylketoxime)silane:**

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

**Methyltrimethoxysilane:**

Acute oral toxicity : LD50 (Rat): 12.3 ml/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): > 42.1 mg/l  
Exposure time: 6 h  
Test atmosphere: vapour  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Based on test data

Acute dermal toxicity : LD50 (Rabbit): > 9,500 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Based on test data

**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

**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

**Ethyl methyl ketoxime:**

Acute oral toxicity : LD50 (Rat): 2,326 mg/kg



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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

**Skin corrosion/irritation**

Not classified based on available information.

**Components:****Methyltri(ethylmethylketoxime)silane:**

Species: Rabbit

Result: No skin irritation

Remarks: Based on data from similar materials

**Methyltrimethoxysilane:**

Species: Rabbit

Result: No skin irritation

Remarks: Based on test data

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

Species: Rabbit

Result: Mild skin irritation

Remarks: Based on test data

**Ethyl methyl ketoxime:**

Species: Rabbit

Result: No skin irritation

**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:****Methyltri(ethylmethylketoxime)silane:**

Species: Rabbit

Result: Irritation to eyes, reversing within 7 days

Remarks: Based on test data

**Methyltrimethoxysilane:**

Species: Rabbit

Result: No eye irritation

Remarks: Based on test data

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

Species: Rabbit

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

**Vinyltri (methylethylketoxime) silane:**

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

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

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

**Ethyl methyl ketoxime:**

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

**Respiratory or skin sensitisation**

Skin sensitisation: May cause an allergic skin reaction.  
Respiratory sensitisation: Not classified based on available information.

**Components:****Methyltri(ethylmethylketoxime)silane:**

Assessment: Probability or evidence of skin sensitisation in humans

Test Type: Maximisation Test (GPMT)

Species: Guinea pig  
Remarks: Causes sensitisation.  
Based on test data

**Methyltrimethoxysilane:**

Assessment: Probability or evidence of low to moderate skin sensitisation rate in humans

Test Type: Buehler Test

Species: Guinea pig  
Remarks: Causes sensitisation.  
Based on test data

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

Assessment: Probability or evidence of skin sensitisation in humans

Test Type: Maximisation Test (GPMT)

Species: Guinea pig  
Remarks: Causes sensitisation.  
Based on data from similar materials

**Vinyltri (methylethylketoxime) silane:**

Assessment: Probability or evidence of skin sensitisation in humans

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Test Type: Maximisation Test (GPMT)  
 Species: Guinea pig  
 Remarks: Causes sensitisation.  
 Based on data from similar materials

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

Assessment: Probability or evidence of skin sensitisation in humans

Test Type: Maximisation Test (GPMT)  
 Species: Guinea pig  
 Remarks: Causes sensitisation.  
 Information taken from reference works and the literature.

**Ethyl methyl ketoxime:**

Test Type: Buehler Test  
 Exposure routes: Skin contact  
 Species: Guinea pig  
 Method: OECD Test Guideline 406  
 Result: positive

Assessment: Probability or evidence of skin sensitisation in humans

**Germ cell mutagenicity**

Not classified based on available information.

**Components:****Methyltri(ethylmethylketoxime)silane:**

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

**Methyltrimethoxysilane:**

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

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
 Test species: Mouse  
 Application Route: Ingestion  
 Result: negative  
 Remarks: Based on test data

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

**Vinyltri (methylethylketoxime) silane:**

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

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Genotoxicity in vivo : Test Type: In vivo micronucleus test  
 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)  
 Test species: Rat  
 Application Route: Ingestion  
 Result: negative

**Carcinogenicity**

Not classified based on available information.

**Components:****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

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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.

### **Methyltrimethoxysilane:**

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 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

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Application Route: Ingestion  
Result: negative

**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.

**Methyltrimethoxysilane:**

Exposure routes: inhalation (vapour)

Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

Exposure routes: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw 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.

**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.

**Ethyl methyl ketoxime:**

Exposure routes: Ingestion

Target Organs: Blood

Assessment: Shown to produce significant health effects in animals at concentrations of 10

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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.

**Repeated dose toxicity****Components:****Methyltri(ethylmethylketoxime)silane:**

Species: Rat

Application Route: Ingestion

Target Organs: Blood

Remarks: Based on test data

**Methyltrimethoxysilane:**

Species: Rat

Application Route: inhalation (vapour)

Remarks: Based on test data

Species: Rat

Application Route: Ingestion

Remarks: Based on test data

**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

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

Application Route: Ingestion

Remarks: Based on test data

**Ethyl methyl ketoxime:**

Species: Rat

LOAEL: 0.36 mg/l

Application Route: inhalation (vapour)

Exposure time: 28 d

Species: Rat

NOAEL: 4 mg/l

LOAEL: 20 mg/kg

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Application Route: Ingestion  
Exposure time: 28 d

**Aspiration toxicity**

Not classified based on available information.

**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.

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****Methyltri(ethylmethylethylketoxime)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.

**Methyltrimethoxysilane:**

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia sp.): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	: ErC50 ( Pseudokirchneriella subcapitata (green algae)): > 100 mg/l



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Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to bacteria : EC50: > 100 mg/l  
Method: OECD Test Guideline 209

**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 bacteria : EC50 (Pseudomonas putida): 67 mg/l  
Exposure time: 16 h  
Test Type: Growth inhibition  
Method: DIN 38 412 Part 8

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

**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

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Toxicity to bacteria : EC50 (Pseudomonas putida): 281 mg/l  
Exposure time: 17 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 100 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

**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

**Methyltrimethoxysilane:**

Stability in water : Degradation half life: 2.2 h pH: 7

**Vinyltri (methylethylketoxime) silane:**

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 1 s

**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

**Ethyl methyl ketoxime:**

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

**Bioaccumulative potential****Components:****Methyltri(ethylmethylketoxime)silane:**

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

**Methyltrimethoxysilane:**

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Partition coefficient: n-octanol/water : log Pow: -2.36

**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

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**13. DISPOSAL CONSIDERATIONS****Disposal methods**

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

Contaminated packaging : Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

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**14. TRANSPORT INFORMATION****International Regulation****UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**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.

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### 15. REGULATORY INFORMATION

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

Priority Chemical List (PCL) : Not applicable

Chemical Control Order (CCO) : Not applicable

#### 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.

ENCS/ISHL : All components are listed on ENCS/ISHL or exempted from inventory listing.

PICCS : All ingredients listed or exempt.

NZIoC : All ingredients listed or exempt.

#### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

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### 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/>

Date format : yyyy/mm/dd

#### Full text of other abbreviations

DCC OEL : Dow Corning Guide

DCC OEL / TWA : Time weighted average

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, un-

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less 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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