

# MATERIAL SAFETY DATA SHEET

## PERFECT SEALANT CS-222

# CHEMSEAL

Revision Date:  
2017/02/20

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : PERFECT SEAL CS-222

#### Manufacturer

Company : TOPLA Co., Ltd

**Supplier** : **GHI Co., Ltd.**

Address : 16-gil, 6 Jinjang-Dong Bukgu Ulsan, South Korea

Telephone : + 82-52-298-2259

Emergency telephone number : + 82-52-294-0250

Telefax : + 82-52-298-2550

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

Recommended use : Construction materials and additives

### 2. HAZARDS IDENTIFICATION

#### GHS Classification

Serious eye damage/eye irritation : Category 2A

Skin sensitisation : Category 1

#### GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.

Precautionary statements :

#### Prevention:

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

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P280 Wear protective gloves/ eye protection/ face protection.

### Response:

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

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

P337 + P313 If eye irritation persists: 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.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Silicone  
Sealant

#### Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
Methyltri(ethylmethylketoxime)silane	22984-54-9	>= 3 - < 5
Distillates (petroleum), hydrotreated middle	64742-46-7	>= 20 - < 30
Vinyltri (methylethylketoxime) silane	2224-33-1	>= 1 - < 1.5
3-Aminopropyltriethoxysilane	919-30-2	>= 0.5 - < 1
Methyltri(ethylmethylketoxime)silane isomers and oligomers	Not Assigned	>= 0.1 - < 0.5
Limestone	1317-65-3	>=40 - < 50

### 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                                      | : | In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.<br>If easy to do, remove contact lens, if worn.<br>Get medical attention. |
| If swallowed  | : | If swallowed, DO NOT induce vomiting.<br>Get medical attention if symptoms occur.<br>Rinse mouth thoroughly with water.  |
| Most important symptoms and effects, both acute and delayed | : | May cause an allergic skin reaction.<br>Causes serious eye irritation.   |
| 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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### 5. FIREFIGHTING MEASURES

- |   |   |   |
|---|---|---|
| Suitable extinguishing media                  | : | Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO <sub>2</sub> )<br>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<br>Silicon oxides<br>Formaldehyde<br>Nitrogen oxides (NO <sub>x</sub> )   |
| Specific extinguishing methods                | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus.<br>Use personal protective equipment.  |

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### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures
- Use personal protective equipment.
- Follow safe handling advice and personal protective equipment recommendations.

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- 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.

### 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.  
Do not get in 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

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated middle	64742-46-7	TWA (Mist)	5 mg/m <sup>3</sup>	KR OEL
Limestone	1317-65-3	TWA	10 mg/m <sup>3</sup>	KR OEL

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- 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 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).
- 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.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : paste
- Colour : White, Black, Grey, Ivory etc.
- Odour : slight
- Odour Threshold : No data available
- pH : Not applicable

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Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	Not applicable
Flash point	:	100 °C Method: closed cup
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not classified as a flammability hazard
Self-ignition	:	The substance or mixture is not classified as pyrophoric. The substance or mixture is not classified as self heating.
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	No data available
Relative density	:	1.423
Solubility(ies) Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
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

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### 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.

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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

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### 11. TOXICOLOGICAL INFORMATION

Exposure routes : Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### Components:

##### **Methyltri(ethylmethylketoxime)silane:**

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

##### **Distillates (petroleum), hydrotreated middle:**

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

Acute inhalation toxicity : LC50 (Rat): > 5,266 mg/m<sup>3</sup>  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

##### **Limestone:**

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

##### **Vinyltri (methylethylketoxime) silane:**

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

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

### **3-Aminopropyltriethoxysilane:**

Acute oral toxicity : LD50 (Rat): 1.57 ml/kg  
Remarks: On basis of test data.

Acute dermal toxicity : LD50 (Rabbit): 4.29 ml/kg  
Remarks: Information taken from reference works and the literature.

### **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

#### **Distillates (petroleum), hydrotreated middle:**

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

#### **3-Aminopropyltriethoxysilane:**

Species: Rabbit  
Result: Corrosive after 3 minutes to 1 hour of exposure  
Remarks: On basis of test data.

### **Serious eye damage/eye irritation**

Causes serious eye irritation.

### **Components:**

#### **Methyltri(ethylmethylketoxime)silane:**

Species: Rabbit  
Result: Irritation to eyes, reversing within 7 days  
Remarks: On basis of test data.

#### **Distillates (petroleum), hydrotreated middle:**

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

#### **Vinyltri (methylethylketoxime) silane:**

Species: Rabbit  
Result: Irreversible effects on the eye  
Remarks: On basis of test data.



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**3-Aminopropyltriethoxysilane:**

Species: Rabbit  
Result: Irreversible effects on the eye  
Remarks: On basis of 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

**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  
Species: Guinea pig  
Remarks: On basis of test data.

**Distillates (petroleum), hydrotreated middle:**

Test Type: Maximisation Test  
Exposure routes: Skin contact  
Species: Guinea pig  
Result: negative  
Remarks: Based on data from similar materials

**Vinyltri (methylethylketoxime) silane:**

Assessment: Probability or evidence of skin sensitisation in humans

Test Type: Maximisation Test  
Species: Guinea pig  
Remarks: Based on data from similar materials

**3-Aminopropyltriethoxysilane:**

Assessment: Probability or evidence of skin sensitisation in humans

Test Type: Maximisation Test  
Species: Guinea pig  
Remarks: On basis of test data.

Test Type: Buehler Test  
Species: Guinea pig

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Remarks: On basis of test data.

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

Assessment: Probability or evidence of skin sensitisation in humans

Test Type: Maximisation Test

Species: Guinea pig

Remarks: Based on data from similar materials

### **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: On basis of test data.

#### **Distillates (petroleum), hydrotreated middle:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

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

#### **Vinyltri (methylethylketoxime) silane:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative  
Remarks: On basis of test data.

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative  
Remarks: On basis of test data.

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

#### **3-Aminopropyltriethoxysilane:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative  
Remarks: On basis of test data.

: Test Type: Chromosome aberration test in vitro  
Result: negative  
Remarks: On basis of test data.

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- : Test Type: Mutagenicity (in vitro mammalian cytogenetic test)  
Result: negative  
Remarks: On basis of test data.
- : Test Type: In vitro sister chromatid exchange assay in mammalian cells  
Result: negative  
Remarks: On basis of test data.
- Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative  
Remarks: On basis of test data.
- Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

**Carcinogenicity**

Not classified based on available information.

**Components:**

**3-Aminopropyltriethoxysilane:**

Species: Mouse  
Application Route: Skin contact  
Result: negative  
Remarks: On basis of test data.

- Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

**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: On basis of 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: On basis of test data.

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

### **Distillates (petroleum), hydrotreated middle:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative  
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative

### **3-Aminopropyltriethoxysilane:**

Effects on fertility : Species: Rat, male and female  
Application Route: Ingestion  
Symptoms: No effects on fertility  
Remarks: On basis of test data.

Effects on foetal development : Test Type: Prenatal development toxicity study (teratogenicity)  
Species: Rat  
Application Route: Ingestion  
Symptoms: No effects on foetal development  
Remarks: On basis of test data.

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

### **STOT - single exposure**

Not classified based on available information.

### **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.

#### **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.

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**3-Aminopropyltriethoxysilane:**

Exposure routes: Ingestion

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

Exposure routes: inhalation (dust/mist/fume)

Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

Exposure routes: Skin contact

Assessment: No significant health effects observed in animals at concentrations of 200 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.

**Repeated dose toxicity**

**Components:**

**Methyltri(ethylmethylketoxime)silane:**

Species: Rat

Application Route: Ingestion

Target Organs: Blood

Remarks: On basis of test data.

**Distillates (petroleum), hydrotreated middle:**

Species: Rat

NOAEL:  $\geq 5,000$  mg/kg

Application Route: Ingestion

Exposure time: 13 Weeks

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

**3-Aminopropyltriethoxysilane:**

Species: Rat

Application Route: Ingestion

Remarks: On basis of test data.

Species: Rat

Application Route: inhalation (dust/mist/fume)

Remarks: On basis of test data.



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Species: Rabbit  
Application Route: Skin contact  
Remarks: Based on data from similar materials

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

Species: Rat  
Application Route: Ingestion  
Target Organs: Blood  
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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**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**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

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### Limestone:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 120 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 120 mg/l  
Exposure time: 48 h
- Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 94 mg/l  
Exposure time: 72 h

### Ecotoxicology Assessment

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

### Distillates (petroleum), hydrotreated middle:

- Toxicity to fish : LL50 (Scophthalmus maximus (turbot)): > 1,028 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction
- Toxicity to daphnia and other aquatic invertebrates : LL50 (Acartia tonsa): > 3,193 mg/l  
Exposure time: 48 h  
Test substance: Water Accommodated Fraction
- Toxicity to algae : EL50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Ceriodaphnia dubia (water flea)): > 100 mg/l  
Exposure time: 8 d  
Test substance: Water Accommodated Fraction
- Toxicity to microorganisms : EC50: > 100 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209

### 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

### 3-Aminopropyltriethoxysilane:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 934 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia sp. (water flea)): 331 mg/l  
Exposure time: 48 h

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### 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: Readily biodegradable.  
Biodegradation: 74 %  
Exposure time: 28 d  
Method: OECD Test Guideline 306

##### **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

### Bioaccumulative potential

#### Components:

##### **Methyltri(ethylmethylketoxime)silane:**

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

##### **3-Aminopropyltriethoxysilane:**

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): < 100

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



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### 14. TRANSPORT INFORMATION

#### International Regulations

##### 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

Law on Chemicals No. 06/2007/QH12

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

KECL : All ingredients listed or exempt.

EINECS : No subject chemicals.

TSCA : No subject chemicals.

MITI : No subject chemicals.

DSL : No subject chemicals.

AICSI : No subject chemicals.

IECSC : No subject chemicals.

PICCS: : No subject chemicals.

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### 16. Oher Information

#### Further information

Prepared by : GHI Co., Ltd R&D dept.

This Material Safety Data Sheet(MSDS) may be changed or modified without prior notice due to product performance improvements or new technologies.
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