

**OS® 2200 Crosslinking Agent**

Version 1

Revision Date 08/09/2011

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**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : OS® 2200 Crosslinking Agent  
MSDS Number : 00000007073  
Product Use Description : Crosslinker for Silicone Sealant.

Company : Honeywell International, Inc.  
101 Columbia Road  
Morristown, NJ 07962-1057

For more information call : 1-800-322-2766  
(Monday-Friday, 9:00am-5:00pm)

**In case of emergency call :** **Medical: 1-800-498-5701 or +1-651-523-0309**  
: **Transportation: 1-800-424-9300 or +1-703-527-3887**  
: (24 hours/day, 7 days/week)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form : liquid  
Color : colourless to yellowish  
Odor : weak  
Hazard Summary : May be harmful if inhaled. May be harmful if swallowed. May be harmful if absorbed through skin. May cause eye, skin, and respiratory tract irritation. May cause irritation of the gastrointestinal tract.

**Potential Health Effects**

Skin : May cause skin irritation.  
May be harmful if absorbed through skin.  
May cause systemic poisoning with symptoms paralleling those of inhalation.  
Eyes : May cause eye irritation.  
Signs/symptoms can include redness, swelling, pain, and tearing.  
Ingestion : Ingestion may cause gastrointestinal irritation, nausea,

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- vomiting and diarrhoea.  
May cause systemic poisoning with symptoms paralleling those of inhalation.
- Inhalation** : May cause respiratory tract irritation.  
Vapours may be irritating to eyes, nose, throat, and lungs.  
The vapour may have narcotic effect  
Inhalation of high vapour concentrations can cause CNS-depression and narcosis.
- Chronic Exposure** : Based on experimental results, may cause adverse health effects on the following:  
Blood  
Spleen  
These effects are reversible.

### Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration
4-Methyl-2-pentanone, O,O',O''-(ethenylsilylidyne) trioxime	156145-64-1	>90.00 %
4-Methyl-2-pentanone oxime	105-44-2	<3.00 %
n-Hexane	110-54-3	<0.90 %

### SECTION 4. FIRST AID MEASURES

- Inhalation** : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.
- Skin contact** : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.
- Eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation develops or

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persists.

Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician.

### Notes to physician

Treatment : Treat symptomatically.

## SECTION 5. FIRE-FIGHTING MEASURES

Flash point : 100 °C (212 °F)  
92/69/EEC, A.9

Ignition temperature : 281 °C (538 °F)

Lower explosion limit : no data available

Upper explosion limit : no data available

Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Alcohol-resistant foam  
Dry chemical  
Water may be ineffective.  
Decomposes in contact with water.

Specific hazards during fire fighting : In case of fire hazardous decomposition products may be produced such as:  
Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.  
Silicon oxide

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus and protective suit.

Additional advice : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear personal protective equipment.  
Immediately evacuate personnel to safe areas.  
Keep people away from and upwind of spill/leak.  
Ensure adequate ventilation.

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- Remove all sources of ignition.  
Do not swallow.  
Avoid breathing vapors, mist or gas.  
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Prevent product from entering drains.  
Discharge into the environment must be avoided.  
Do not flush into surface water or sanitary sewer system.  
Do not allow run-off from fire fighting to enter drains or water courses.
- Methods for cleaning up : Ventilate the area.  
No sparking tools should be used.  
Use explosion-proof equipment.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

**SECTION 7. HANDLING AND STORAGE****Handling**

- Handling : Wear personal protective equipment.  
Use only in well-ventilated areas.  
Keep container tightly closed.  
Protect from atmospheric moisture and water.  
Do not smoke.  
Do not swallow.  
Avoid breathing vapors, mist or gas.  
Avoid contact with skin, eyes and clothing.
- Advice on protection against fire and explosion : Keep away from fire, sparks and heated surfaces.  
Keep product and empty container away from heat and sources of ignition.  
Take precautionary measures against static discharges.  
Ensure all equipment is electrically grounded before beginning transfer operations.  
Use explosion-proof equipment.  
No sparking tools should be used.  
No smoking.

**Storage**

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Requirements for storage areas and containers : Store in area designed for storage of flammable liquids. Protect from physical damage.  
Keep containers tightly closed in a dry, cool and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Keep away from heat and sources of ignition.  
Keep away from direct sunlight.  
Protect from atmospheric moisture and water.  
Store away from incompatible substances.  
Container hazardous when empty.  
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Engineering measures : Use with local exhaust ventilation.  
Prevent vapor buildup by providing adequate ventilation during and after use.

Eye protection : Do not wear contact lenses.  
Wear as appropriate:  
Safety glasses with side-shields  
Goggles  
If splashes are likely to occur, wear:  
Goggles or face shield, giving complete protection to eyes

Hand protection : Solvent-resistant gloves (butyl-rubber)  
Neoprene gloves  
Gloves must be inspected prior to use.  
Replace when worn.

Skin and body protection : Wear as appropriate:  
Long sleeved clothing  
Gloves  
If splashes are likely to occur, wear:  
Protective suit

Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.  
Use NIOSH approved respiratory protection.  
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.

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Hygiene measures : When using do not eat, drink or smoke.  
Wash hands before breaks and immediately after handling the product.  
Keep working clothes separately.  
Remove and wash contaminated clothing before re-use.  
Do not swallow.  
Avoid breathing vapors, mist or gas.  
Avoid contact with skin, eyes and clothing.

**Exposure Guidelines**

4-Methyl-2-pentanone oxime      105-44-2      HONEYWELL      TWA      3.0 ppm

We are not aware of any national exposure limit.

Skin designation:  
Can be absorbed through the skin.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form : liquid

Color : colourless to yellowish

Odor : weak

Molecular Weight : 397 g/mol

pH : 6.3

Melting point/range : < -25 °C (< -13 °F)

Boiling point/boiling range : Decomposes on heating.

Vapor pressure : 720 µPA  
at 25 °C (77 °F)

Density : 0.941 g/cm<sup>3</sup>  
at 20 °C (68 °F)92/69/EEC, A.3

Water solubility : Hydrolyzes to the oxime in the presence of moisture.

Partition coefficient:  
n-octanol/water : log Pow: 12.91

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**SECTION 10. STABILITY AND REACTIVITY**

- Conditions to avoid : Heat, flames and sparks.  
Keep away from direct sunlight.  
Protect from atmospheric moisture and water.
- Materials to avoid : Acids  
Oxidizing agents  
Metals  
Iron
- Hazardous decomposition products : Decomposes in contact with water.  
In case of fire hazardous decomposition products may be produced such as:  
Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.  
Silicon oxide
- Thermal decomposition : >207 °C  
Decomposition temperature
- Hazardous reactions : Avoid exposure to water, strong acids and heat, especially in the presence of iron.  
Hazardous polymerisation may occur.  
May react violently if in contact with electrophiles, such as ferric chloride.  
Stable under recommended storage conditions.

**SECTION 11. TOXICOLOGICAL INFORMATION**

- Acute oral toxicity : LD50: > 2,000 mg/kg  
Species: rat  
Method: OECD
- Acute inhalation toxicity : Note: no data available
- Acute dermal toxicity : LD50: > 2,000 mg/kg  
Species: rat  
Method: OECD
- Skin irritation : Species: rabbit

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	Result: Mild skin irritation
Eye irritation	: Species: rabbit Result: Mild eye irritation
Sensitisation	: Species: guinea pig Classification: non-sensitizing
Repeated dose toxicity	: Species: rat Application Route: Oral Exposure time: 13 Weeks NOAEL (No observed adverse effect level): 15 mg/kg/d
Genotoxicity in vitro	: Test Method: Ames test Metabolic activation: with or without metabolic activation Result: negative
	: Test Method: Chromosome aberration test in vitro Cell type: Human lymphocytes Result: negative
Genotoxicity in vivo n-Hexane	: Note: In vivo tests did not show mutagenic effects
Reproductive toxicity 4-Methyl-2-pentanone oxime	: Species: rat Application Route: Oral Exposure time: One generation reproduction study Note: Reproductive toxicity – NOEL – 100 mg/kg, no adverse effects on reproduction.
	Species: rat Application Route: Oral Exposure time: One generation reproduction study Note: Parental toxicity – NOEL – 10 mg/kg, hemolytic effects.

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

Toxicity to fish : semi-static test

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LC50: > 100 mg/l  
Exposure time: 96 h  
Species: Oncorhynchus mykiss (rainbow trout)  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates. : Immobilization  
EC50: > 100 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)

Toxicity to algae : ErC50: > 100 mg/l  
Exposure time: 72 h  
Species: Pseudokirchneriella subcapitata (green algae)

: EbC50: > 100 mg/l  
Exposure time: 72 h  
Species: Pseudokirchneriella subcapitata (green algae)

Toxicity to bacteria : EC50: > 100 mg/l  
Exposure time: 3 h  
End point: Respiration inhibition  
Species: activated sludge

Toxicity to daphnia and other aquatic invertebrates. (Chronic toxicity)  
4-Methyl-2-pentanone oxime : NOEC: 92 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

**Elimination information (persistence and degradability)**

Biodegradability : Result: Not readily biodegradable.  
Value: 4 %  
Method: Closed Bottle test

**Further information on ecology****SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Information: Observe all Federal, State, and Local Environmental regulations.

**SECTION 14. TRANSPORT INFORMATION**

**DOT** Not dangerous goods

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**TDG** Not dangerous goods**IATA** Not dangerous goods**IMDG** Not dangerous goods**SECTION 15. REGULATORY INFORMATION****Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act : Not in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 144) : All components of this product are on the Canadian DSL list.

Japan. Kashin-Hou Law List : Not in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act : Not in compliance with the inventory

China. Inventory of Existing Chemical Substances : Not in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : Not in compliance with the inventory

TSCA 12B : US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

4-Methyl-2-pentanone, 156145-64-1  
O,O',O''-(ethenylsilylidyne) trioxime

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**National regulatory information**

US. Toxic Substances : Listed  
Control Act (TSCA) Section  
5(a)(2) Final Significant  
New Use Rules (SNURs)  
(40 CFR 721, Subpt E)

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**California Prop. 65** : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**WHMIS Classification** : D2B  
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**SECTION 16. OTHER INFORMATION**

	<b>HMIS III</b>	<b>NFPA</b>
Health hazard	: 2*	2
Flammability	: 1	1
Physical Hazard	: 0	
Instability	:	0

\* - Chronic health hazard