

SAFETY DATA SHEET

Date Updated: 01.06.2013
Version: EU 4.6
Regulation REACH (EC 1907/2006) & CLP (EC 1272/2008)

ONICHEM
Onichem Specialities
www.onichem.com

Organosilane GC301

**** SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING ****

SDS Name: **Organosilane GC301**

Chemical Name: 2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane, 90% min

Synonym(s): 2-(3,4-epoxycyclohexyl)ethyltrimethoxysilane

IUPAC Name: trimethoxy-[2-(7-oxabicyclo[4.1.0]heptan-4-yl)ethyl]silane

Company Identification: Dalian Onichem Co., Ltd.

No. 2 Gaoxin Street, Qixianling, Dalian 116023, P.R. China

Tel: 86-411-84794022, Fax: 86-411-84794077

For emergencies, call CHEMTREC 1-800-424-9300 or 1-202-483-7616

**** SECTION 2 - HAZARDS IDENTIFICATION ****

EU-GHS Classifications

Classifications below according to Regulation (EU) No 1272/2008 on classification, labelling and packaging of Substances and Mixtures (CLP).

Skin Sensitization	Category 1	H317
Carcinogenicity	Category 2	H351
Aquatic Chronic	Category 3	H412

GHS-Labeling:

Globally Harmonized System of Classification and Labelling (GHS)

Symbol(s):



Hazard Pictogram: GHS07,GHS08

Signal Word: Warning

Hazard Statement:	H317	May causes an allergic skin reaction.
	H351	Suspected of causing cancer.
	H412	Harmful to aquatic life with long lasting effects.

Precautionary Statement:	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
	P501	Dispose of contents/container to an approved incineration.

Other Hazards A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required/has not been carried out.

**** SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS ****

Ingredient (Chemical Name)	CAS#	EC#	Symbol(s)	R-phrase(s)	Hazard statements
2-(3,4-Epoxycyclohexyl)ethyl trimethoxysilane, 90% min.	3388-04-3	222-217-1	Xn	R40 R43 R52/53	H351 H317 H412
Related silanes, 8%max.	N/A				

**** SECTION 4 - FIRST AID MEASURES ****

General information: Take persons to a safe place. Observe self-protection for first aid. Before seeking medical attention remove contaminated clothing and shoes. Take a copy of the Safety Data Sheet when going for medical treatment.

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Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, also under the eyelids. Consult an ophthalmologist.

Skin: Flush skin with plenty of soap and water. Remove the contaminated clothing immediately and wash it before reuse. Consult a physician.

Ingestion: Have the mouth rinsed with water if conscious, have patient drink plenty of water in small sips. Call a physician or poison control center immediately.

Inhalation: Remove to fresh air at once. Give artificial respiration if necessary, call a physician or poison control center immediately.

Indication of any immediate medical attention and special treatment needed:

Product may hydrolyse upon contact with body fluids in the gastrointestinal tract to produce additional methanol; for this reason, consider the symptoms of methanol poisoning and also observe the known latency period of several days

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan.

Suitable extinguishing media: Use alcohol resistant foam, dry chemical, or carbon dioxide.

Further information: Do not direct a solid stream of water or foam into hot, burning pools: this may cause frothing and increase fire intensity. Cool closed containers exposed to fire with water spray.

Unusual Fire and Explosion Hazards: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

Flash Point: 146°C (295°F)

Auto-ignition temperature: N/A.

Explosion Limits, Lower: N/A

Upper: N/A

HMIS Classification

NFPA Rating

Health 3

Health 3

Flammability 1

Fire 1

Physical hazard 1

Reactivity 1

Advice for firefighters: Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulation

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8. Keep out unprotected persons, ensure adequate ventilation.

Spills/Leaks: Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container, to be disposed of in compliance with existing regulations.

Environmental precautions: Do not flush into surface water, sanitary sewer system

**** SECTION 7 - HANDLING AND STORAGE ****

Handling: Provide good ventilation or extraction. Do not breathe spray vapor, or mist. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Wash hands after handling. Product may charge electrostatically during pouring or filling. Use proper bonding and grounding during material transfer.

Storage: Keep containers tightly closed. Keep away from heat and sources of ignition – No smoking

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment (PPE)

Eyes: Wear safety glasses and chemical goggles if splashing is possible.

Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-face piece airline respirator in the positive pressure mode with emergency escape provisions.

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Hygiene measures: When using, do not eat, drink or smoke. Wash face and hands before break and end of work. Remove and wash contaminated clothing before re-use.

Protective measures: Handle in accordance with good industrial hygiene and safety practices. It should be defined in the work place in the form of a risk analysis according to directive 89/686/EEC and amendments.

If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.

If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used.

Do not breathe in vapors or aerosols. Avoid contact with skin and eyes

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Appearance: Colorless to slight yellowish liquid.

Odor: Faint.

pH: N/A.

Vapor Pressure: < 1.33 hPa @ 20°C

Vapor Density: N/A.

Evaporation Rate: < 1

Viscosity: N/A.

BP/BP Range: 310°C

Freezing/Melting Point: < 0°C

Decomposition Temperature: N/A.

Solubility: Reacts slowly.

Specific Gravity/Density: 1.065 g/cm³ @ 25°C

Molecular Formula: C₁₁H₂₂O₄Si

Molecular Weight: 246.38

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Moisture, water, heat, alkalis, acids, alcohols.

Materials to Avoid: Strong oxidizing agents - water or moisture, Amines, Alkalies.

Hazardous Decomposition Products: Methanol in case of hydrolysis. Carbon oxides, Oxides of silicon under high temperature condition. Carbon monoxide is highly toxic if inhaled. Acute overexposure to the products of combustion may result in irritation of the respiratory tract

Hazardous Polymerization: Has not been reported

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

Acute oral toxicity: LD₅₀ – Rat > 13,000 mg/kg

Acute dermal toxicity: LD₅₀ – Rabbit 6,700 mg/kg

Acute inhalation toxicity: Rat, no deaths, 8h

Skin irritation – Rabbit, slightly irritating.

Eye Irritation – Rabbit, no eye irritation.

Repeated dose toxicity: Dermal Rabbit, 19d, NOEL: 1 ml/kg

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Toxicity to fish: LC₅₀, Cyprinus carpio, 42.3 mg/l OECD Test Guideline 203

Toxicity to other organisms: static test EC₅₀, Daphnia magna, 58 mg/l OECD Test Guideline 202

Toxicity to algae: static test EC₅₀, Algae, 36mg/l OECD Test Guideline 201

Toxicity to microorganisms: IC₅₀, Bacteria, > 100 mg/l OECD-Guideline NO. 209

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.

Do not reuse empty containers and dispose of in accordance with the regulation issued by the appropriate local authorities. If there is product residue in the emptied container, follow directions for handling on the container's label.

Incorrect disposal or reuse of this container is illegal and can be dangerous.

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No waste key number as per the European Waste Typed List can be assigned to this product, since such classification is based on (as yet undetermined) use to which the product is put by the consumer. The waste key number must be determined as per the European Waste Types List(EU Waste Types List 2000/532/EC) in cooperation with the disposal firm, producing firm or authority

**** SECTION 14 - TRANSPORT INFORMATION ****

This product is not regulated as dangerous goods by DOT, IMDG, ADR/RID, IATA/ICAO
Keep away from foodstuffs and animal feed.

**** SECTION 15 - REGULATORY INFORMATION ****

European/International Regulations

European Labeling in Accordance with EC Directives

Statutory basis/list: According to Directive 67/548/EEC or 1999/45/EC

Hazard Symbol(s): Xn Harmful.

Risk Phrases: R40 Limited evidence of a carcinogenic effect.

R43 May cause sensitization by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases: S36/37 Wear suitable protective clothing and gloves.

S60 This material and its container must be disposed of as hazardous waste.

Other international regulations:

Listed on or in accordance with the following inventories

AICS – Listed/registered

EINECS –Listed/registered

ENCS - Listed/registered

IECSC - Listed/registered

KECL - Listed/registered

DSL - Listed/registered

PICCS –Listed/registered

TSCA - Listed/registered

**** SECTION 16 - ADDITIONAL INFORMATION ****

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages