

MATERIAL SAFETY DATA SHEETDate Updated: 02.06.2010
Version: 3.0**ORGANOSILANE C301****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

MSDS Name: Organosilane C301

Chemical Name: 3-Chloropropyltrimethoxysilane, 98%

Company Identification: Dalian Onichem Co., Ltd.

218-220, 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

Generic Description: Alkoxysilane

Physical Form: Liquid

Color: Colorless to pale yellow

Odor: Alcoholic odor

NFPA Profile:

Note: NFPA = National Fire Protection Association

2. OSHA HAZARDOUS COMPONENTS

CAS Number	Wt %	Chemical Name
2530-87-2	> 98.0	3-Chloropropyltrimethoxysilane
67-56-1	<1.0	Methyl alcohol

3. HAZARDS IDENTIFICATION

Potential Health Effects

Acute Effects

Eye: Direct contact may cause severe irritation.

Skin: May cause moderate irritation.

Inhalation: Vapor may irritate nose and throat.

Oral: Overexposure by ingestion may cause effects similar to those listed under repeated exposure.

Prolonged/Repeated Exposure Effects

Skin: Overexposure by skin absorption may injure the following organ(s): Kidneys. Bladder.

Inhalation: Product generates methyl alcohol which may cause blindness and damage to nervous system. Overexposure by inhalation may injure the following organ(s): Liver. Kidneys. Bladder. Adrenals.

Oral: Product generates methyl alcohol which may cause blindness and possibly death if swallowed.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

4. FIRST AID MEASURES

Eye: Immediately flush with water for 15 minutes. Get medical attention.

Skin: Remove from skin and immediately flush with water for 15 minutes. Get medical attention if irritation or ill effects develop or persist.

Inhalation: Remove to fresh air. Get medical attention if ill effects persist.

Oral: Get medical attention.

Comments: Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point: 84 °C

Autoignition Temperature: Not determined.

Flammability Limits in Air: Not determined.

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Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO₂), dry chemical or water spray. Water can be used to cool fire exposed containers.

Fire Fighting Measures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Determine the need to evacuate or isolate the area according to your local emergency plan.

Unusual Fire Hazards: Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge.

Hazardous Decomposition Products: Thermal breakdown of this product during fire or very high heat conditions may evolve the following hazardous decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Chlorine compounds. Silicon dioxide. Formaldehyde.

6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up:

Remove possible ignition sources. Determine whether to evacuate or isolate the area according to your local emergency plan. Observe all personal protection equipment recommendations described in Sections 5 and 8. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbant. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and 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 federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

Note: See section 8 for Personal Protective Equipment for Spills.

7. HANDLING AND STORAGE

Use with adequate ventilation. Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus. Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed. Do not take internally.

Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge. Keep container closed and away from heat, sparks, and flame. Keep container closed and store away from water or moisture.

8. EXPOSURE CONTROLS / PERSONAL PROTECTIONComponent Exposure Limits

CAS Number	Component Name	Exposure Limits
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Methyl alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 200 ppm and ACGIH TLV-skin: TWA 200 ppm, STEL 250 ppm.

Engineering Controls

Local Ventilation: Recommended.

General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling

Eyes: Use chemical worker's goggles.

Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Suitable Gloves: Silver Shield(R). 4H(R).

Inhalation: Use respiratory protection unless adequate local exhaust ventilation is provided or air sampling data show exposures are within recommended exposure guidelines. Industrial Hygiene Personnel can assist in judging the adequacy of existing engineering controls.

Suitable Respirator: Organic Vapor Type.

Personal Protective Equipment for Spills

Eyes: Use full face respirator.

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Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Inhalation/Suitable Respirator: Use self-contained breathing apparatus (SCBA) or other supplied-air respirator.

Precautionary Measures: Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed. Do not take internally. Use reasonable care.

Comments: Product evolves flammable methyl alcohol when exposed to water or humid air. Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding aerosol inhalation toxicity, please refer to the guidance document regarding the use of silicone-based materials in aerosol applications that has been developed by the silicone industry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid

Color: Colorless to pale yellow

Odor: Alcoholic odor

Specific Gravity @ 25°C: 1.09

Viscosity: 1.4 cSt

Freezing/Melting Point: Not determined.

Boiling Point: >= 180.00 °C

Vapor Pressure @ 25°C: Not determined.

Vapor Density: Not determined.

Solubility in Water: Not determined.

pH: Not determined.

Volatile Content: Not determined.

Note: The above information is not intended for use in preparing product specifications.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Hazardous polymerization will not occur.

Conditions to Avoid: None.

Materials to Avoid: Reacts with water and moisture in humid air, liberating methanol. Avoid contact with peroxides, oxidizing agents, alcohols, acids, Lewis acids.

11. TOXICOLOGICAL INFORMATIONComponent Toxicology Information

Chloropropyltrimethoxysilane was found to be genetically active via inhalation in a bone marrow micronucleus assay (female rats exposed to 200 ppm/day for 28 days). In the same assay, no evidence of genetic activity was found in mice exposed to 500, 1000 or 1625 mg/kg by I.P. injection. The potential relevance of this to humans has not yet been determined.

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution: Complete information is not yet available.

Environmental Effects: Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants: Complete information is not yet available.

13. DISPOSAL CONSIDERATIONS

State or local laws may impose additional regulatory requirements regarding disposal.

14. TRANSPORT INFORMATION

It is not regulated by DOT or IMDG.

15. REGULATORY INFORMATION

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EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances (40 CFR 355): None.

Section 304 CERCLA Hazardous Substances (40 CFR 302): None.

Section 313 Toxic Chemicals (40 CFR 372): None present or none present in regulated quantities.

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.