

**MATERIAL SAFETY DATA SHEET**Date Updated: 24.07.2008  
Version: 3.0**ORGANOSILANE AE311****\*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\***

MSDS Name: Organosilane AE311

Chemical Name: N-(2-Aminoethyl)-3-aminopropylmethyldimethoxysilane, 97%

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

**\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\***

CAS#	Chemical Name	OSHA
3069-29-2	N-(2-Aminoethyl)-3-aminopropylmethyldimethoxysilane, 97% min	not established
67-56-1	Methanol, 0.5% max	not established
107-15-3	Ethylenediamine, 0.5% max	not established

**\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*****EMERGENCY OVERVIEW:**

Moisture sensitive and can release methanol.

Eye: Vapors may cause immediate or delayed severe eye irritation. Liquid can cause severe conjunctivitis and corneal damage. This product slowly releases methanol.

Skin: May produce irritation or contact dermatitis which may be delayed several hours. Prompt and thorough washing with soap and water will reduce or eliminate potential dermal effects.

Ingestion: Not available.

Inhalation: Inhalation of vapors or particulates of aminoalkylsilanes will irritate the respiratory tract.

Overexposure may produce coughing, headache and nausea of breath and delayed lung edema.

Oral Toxicity: N/A

Chronic: N/A

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

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical attention.

Skin: Flush skin with plenty of soap and water for at least 15 minutes

Ingestion: Never give fluids or induce vomiting if patient is unconscious or having convulsions. Get medical attention.

Inhalation: Remove from exposure to fresh air immediately. Get medical attention

Notes to Physician: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and formic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 mls/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated with intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

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

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media: Water spray, foam, carbon dioxide, dry chemical.

Special Fire Fighting Procedures: Avoid eye and skin contact. Do not breathe fumes or inhale vapors.

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

**MATERIAL SAFETY DATA SHEET**

Date Updated: 24.07.2008  
Version: 3.0

---

Autoignition Temperature: N/A  
Flash Point: 90 deg C (194 deg F)  
NFPA Rating: Not published.  
Explosion Limits, Lower: N/A  
Upper: N/A

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

General Information: Use proper personal protective equipment as indicated in Section 8.  
Spills/Leaks: Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container.

**\*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\***

Store in sealed containers

**\*\*\*\* 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  
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-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

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

Appearance: clear to pale yellowish liquid  
Odor: mild amine (ammonia-like) odor.  
PH: N/A  
Vapor Pressure: not determined  
Vapor Density: N/A.  
Evaporation Rate: N/A  
Viscosity: N/A  
Boiling Point: 265 deg C @ 760.00 mm Hg  
Freezing/Melting Point: not determined  
Solubility: reacts with water  
Specific Gravity: 0.975 @ 25 deg C  
Molecular Formula: C<sub>8</sub>H<sub>22</sub>N<sub>2</sub>O<sub>2</sub>Si  
Molecular Weight: 206.36

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

Chemical Stability: Stable under normal temperatures and pressures.  
Conditions to Avoid: Combustible; avoid contact with heat, sparks or open flame  
Incompatibilities with Other Materials: Reacts with water and moisture in air liberating methanol.  
Avoid contact with peroxides, oxidizing agents, alcohols, acids.  
Hazardous Decomposition Products: Organic acid vapors, methanol  
Hazardous Polymerization: Has not been reported.

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

Oral Toxicity - rat, LD50: N/A  
Carcinogenicity: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**MATERIAL SAFETY DATA SHEET**

Date Updated: 24.07.2008  
Version: 3.0

---

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

Ecotoxicity: N/A

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

Dispose of in a manner consistent with federal, state, and local regulations.  
Not listed as a material banned from land disposal according to RCRA.

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

N/A

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

Labelling according to EC Directives

Statutory basis/list: According to Directive 67/548/EEC

Symbols: Xi, Irritant

Risk Phrases:

R41: Risk of serious damage to the eyes.

R43: May cause sensitization by skin contact.

Safety Phrases:

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28: After contact with skin, wash immediately with plenty of soap-suds.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

**\*\*\*\* 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.