

# 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 AE311

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

SDS Name: **Organosilane AE311**

Chemical Name: N-[3-(dimethoxymethylsilyl)propyl]ethylenediamine, 97%

Synonym(s): N-(2-Aminoethyl)-3-aminopropylmethyldimethoxysilane

IUPAC Name: N-(2-Aminoethyl)-3-aminopropyl-methyldimethoxysilane

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).

Acute toxicity, oral	Category 4	H302
Skin corrosion/Irritation	Category 2	H315
Skin sensitization	Category 1	H317
Eye Damage/Irritation	Category 1	H318

#### GHS-Labeling:

Globally Harmonized System of Classification and Labelling (GHS)

Symbol(s):



Hazard Pictogram: GHS05, GHS07

Signal Word: Danger

Hazard Statement:	H302 H315 H317 H318	Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.
Precautionary Statement:	P264 P270 P272  P280	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

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
N-[3-(dimethoxymethylsilyl)propyl]ethylenediamine, 97% min	3069-29-2	221-336-6	Xn Xi Xi	R22 R38 R41 R43	H302 H315 H318 H317

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## \*\*\*\* 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.

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes with eye held open. Continue rinsing process with eye rinsing solution. Protect unaffected eye. Immediate further treatment in ophthalmic hospital. Continue rinsing eye until arrival at hospital.

**Skin:** Immediately flush skin with plenty of soap and water. Wash contaminated clothing before reuse. Consult a doctor in the event of persistent skin irritation.

**Ingestion:** If conscious, drink plenty of water. Call a physician immediately.

**Inhalation:** Remove from exposure to fresh air immediately. If respiratory problems, artificial respiration/oxygen. Get medical attention.

### **Indication of any immediate medical attention and special treatment needed:**

After absorbing large amounts of substance:

Liberation of reaction products(Methanol) can lead to symptoms of poisoning.

If required, therapy of irritative effect.

Early endoscopy in order to assess mucosa lesions in the oesophagus and stomach which may appear.

If necessary, suck away leftover substance.

Detection of substance(Methanol) possible in: Blood. Antidote treatment: ethanol.

Allergic reactions can not be excluded. Treatment of allergic reaction if necessary

## \*\*\*\* 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:** 93°C (199°F)

**Auto-ignition temperature:** 280°C (536°F)

**Explosion Limits,** Lower: N/A.

Upper: N/A.

**HMIS Classification**

**NFPA Rating**

Health 3

Health 3

Flammability 1

Fire 1

Physical hazard 2

Reactivity 2

**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. Take precautionary measures against static charges, keep away from sources of ignition. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing mists or vapors. Wash hands after handling.

**Storage:** Keep containers tightly closed in a cool, dry, well-ventilated place. Protect from moisture

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

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

**Protective measures:** Handle in accordance with good industrial hygiene and safety practices. 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:** Clear to pale yellowish liquid

**Odor:** Amine like

**pH:** 10.6 (10 g/l) @ 20°C

**Vapor Pressure:** <1.33 hPa @ 20°C

**Vapor Density:** >1

**Evaporation Rate:** <1

**Viscosity:** 4.7 mPa.s @ 20°C

**BP/BP Range:** 265°C

**Freezing/Melting Point:** <0°C

**Decomposition Temperature:** >340°C

**Solubility:** reacts with water.

**Specific Gravity/Density:** 0.980 g/cm<sup>3</sup> @ 20°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:** moisture.

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

**Hazardous Decomposition Products:** Methanol. In case of fire, gives off: Carbon oxides, Oxides of silicon, Nitrogen Oxides.

**Hazardous Polymerization:** Has not been reported

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

**Acute oral toxicity:** LD<sub>50</sub> Rat: >2,000 mg/kg

**Acute inhalation toxicity:** LC<sub>50</sub> Rat: >5.2mg/l/Aerosol

**Skin irritation:** Rabbit, not irritating.

**Eye irritation:** Rabbit, highly irritative.

**Sensitization:** Guinea pig, sensitizing.

**Carcinogenicity:** Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

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

Toxicity to fish: LC50 *Lepomis macrochirus* > 100 mg/l

Toxicity to other organisms: EC50 *Daphnia magna* 87.4 mg/l/48h

Toxicity to algae: IC50 Algae 30.7 mg/l

## \*\*\*\* 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.

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, ADR/RID, IATA/ICAO.

IMDG: Not classified as hazardous sea cargo (IMDG code). For USA only, packaging size more than 450l: NA 1993 COMBUSTIBLE LIQUID, N.O.S (N-Aminoethyl-3-aminopropyl-methyl-dimethoxysilan), III.

Flash Point: 93°C

## \*\*\*\* 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 Symbols: Xi Irritant.

Xn Harmful.

Risk Phrases: R22 Harmful if swallowed.

R38 Irritating to skin.

R41 Risk of serious damage to the eyes.

R43 May cause sensitization by skin contact.

Safety Phrases: S24/25 Avoid contact with skin and eyes.

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

### 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