

MATERIAL SAFETY DATA SHEET

Date Updated: 29.06.2007
Version: 3.0
Regulation EC No. 1907/2006

ORGANOSILANE A302****** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION *****

MSDS Name: Organosilane A302

Chemical Name: 3-Aminopropyltriethoxysilane, 98%
3-Triethoxysilylpropylamine, 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

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

CAS#	Chemical Name, %	EC No.	Regulation
919-30-2	3-Aminopropyltriethoxysilane, 98% min	213-048-4	Xn, R22 C, R34

****** SECTION 3 - HAZARDS IDENTIFICATION ******

3.1 Classification:

R22: Harmful if swallowed.

R34: Causes burns.

3.2 Further hazards to man and environment:

Inhalation of aerosol spray may damage health.

EMERGENCY OVERVIEW

Moisture sensitive.

Target Organs: None.

Potential Health Effects

Eye: Contact with eyes may cause severe irritation.

Skin: May cause severe irritation.

Ingestion: N/A

Inhalation: May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema.

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.

Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do NOT induce vomiting. Allow the victim to rinse his mouth and then to drink 2-4 cupfuls of water, and seek medical advice.

Inhalation: Remove from exposure to fresh air immediately.

Notes to Physician: Treat symptomatically and supportively.

****** 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: Do NOT use water directly on fire. Use foam, dry chemical, or carbon dioxide.

Auto-ignition Temperature: 300

Flash Point: 96

NFPA Rating: Not published.

Explosion Limits, Lower: N/A.

Upper: N/A.

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****** 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.

To be disposed of in compliance with existing regulations

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

Provide good ventilation or extraction.

Normal measures of preventive fire protection.

Keep containers tightly closed in a cool, dry, well-ventilated place.

****** 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 liquid, colorless to light yellowish

Odor: amine

pH: 11.3

Vapor Pressure: <1 mPa @ 20

Vapor Density: N/A.

Evaporation Rate: N/A.

Viscosity: N/A.

Boiling Point: 217 @ 760.00mm Hg

Freezing/Melting Point: <-70 C

Decomposition Temperature: > 217

Auto-ignition Temperature: 300

Flash Point: 96

Solubility: reacts with water

Specific Gravity/Density: 0.9420g/cm³Molecular Formula: C₉H₂₃NO₃Si

Molecular Weight: 221.37

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

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: moisture, water, alkalis, acids, alcohols

Incompatibilities with Other Materials: Strong oxidizing agents - moist air or water.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen.

Hazardous Polymerization: Has not been reported.

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

RTECS#: CAS# 919-30-2: TX2100000

LD50/LC50: CAS# 919-30-2: Oral, rat: LD50 = 1780 mg/kg; Skin, rabbit: LD50 = 4000mg/kg.

Carcinogenicity: 3-Aminopropyltriethoxysilane, 98%

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

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

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12.1 Ecotoxicity

Species	Test method	Exp. Time	Result	Source
Scenedesmus subspicatus	acute	72 h	603 mg/l (EC50)	literature
Daphnia magna	acute	48 h	331 mg/l (EC50)	literature
Zebra fish (Brachydanio rerio)	acute	96 h	> 934 mg/l (LC50)	literature

Effects in sewage treatment plants (bacteria toxicity: respiration-/reproduction inhibition):

Test system	Exp. Time	Result	Source
Pseudomonas putida	5 h	13 mg/l (EC10)	literature

Do not introduce large amounts into purification plants.

12.2 Mobility

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12.3 Persistence and degradability

Biodegradation:

Method	Degree of elimination	Classification	Source
DOC Die-Away Test / Modified AFNOR Test	67 %	Good potential biodegradability	literature

Further information:

By hydrolysis: ethanol and silanol- and/or siloxanol-compounds .

12.4 Bio-accumulation potential

12.5 Other harmful effects

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12.6 Further ecological information

General information: Do not introduce into waters and into soil.

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

13.1 Material

Recommendation: Dispose of according to regulations by incineration in a special waste incinerator. Observe local/state/federal regulations.

13.2 Uncleaned packaging

Recommendation: Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.

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

14.1 Land transport GGVSE/ADR and RID

Class.....: 8
Packaging Group.....: II
Hazard No.: 80
UN no.: 3267
Proper Shipping Name.....: Corrosive liquid, basic, organic, n.o.s.
Technical name.....: (3-Aminopropyltriethoxysilan)

14.2 Transport by sea GGVSee/IMDG-Code

Class.....: 8
Packaging Group.....: II
UN no.: 3267
Proper Shipping Name.....: Corrosive liquid, basic, organic, n.o.s.
Technical name.....: (3-aminopropyltriethoxysilane)
EmS No.: F-A, S-B
Marine Pollutant.....: no

14.3 Air transport ICAO-TI/IATA-DGR

Class.....: 8
Packaging Group.....: II
UN no.: 3267
Proper Shipping Name.....: Corrosive liquid, basic, organic, n.o.s.

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Technical name.....: (3-aminopropyltriethoxysilane)

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

15.1 Warning Label (EU)

	C	Corrosive
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Risks & Safety Phrases:

R22: Harmful if swallowed.

R34: Causes burns.

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

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

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

EC-No.: 213-048-4

Hazard ingredients (labelling EU):

CAS No.	Material	Hazard symbols	Risk phrases (EU)
919-30-2	3-Aminopropyltriethoxysilane	C	22-34

**** 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.

N/A: not available