

# SAFETY DATA SHEET

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

**ONICHEM**  
Onichem Specialities  
www.onichem.com

## 3-Ureidopropyltriethoxysilane [ Organosilane U302 ]

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

SDS name: **3-Ureidopropyltriethoxysilane (Organosilane U302)**  
Chemical name: 3-Ureidopropyltriethoxysilane in methanol  
Synonym(s): Reaction mass of methanol and [3-(triethoxysily)propyl]urea  
IUPAC Name: 3-triethoxysilylpropylurea in methanol  
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)

Flammable liquids	Category 2	H225
Acute toxicity, Dermal	Category 3	H331
Acute toxicity, Oral	Category 3	H311
Acute toxicity, Inhalation	Category 3	H301
Specific target organ toxicity	Category 1	H370

#### GHS-Labeling:

Globally Harmonized System of Classification and Labelling (GHS)

Symbol(s):



Hazard Pictogram: GHS02, GHS06, GHS08.  
Signal Word: Danger

Hazard Statement:	H225 H331 H311 H301 H350 H370	Highly flammable liquid and vapor. Toxic if inhaled. Toxic in contact with skin. Toxic if swallowed. May cause cancer. Causes damage to organs.
Precautionary Statement:	P101  P280  P201 P381 P308+P313  P403	If medical advice is needed, have product container or label at hand. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Eliminate all ignition sources if safe to do so. If exposed or concerned: Get medical advice /attention. Store in a well-ventilated place.

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## \*\*\*\* SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS \*\*\*\*

Ingredient(Chemical Name)	CAS#	EC#	Symbol(s)	R-pharse(s)	Hazard statement
3-Ureidopropyltriethoxysilane, 50%max.	23779-32-0	245-876-7	F T T T	R11 R23 R24 R25 R39	H225 H331 H311 H301 H370
Methanol, 50%max.	67-56-1	200-659-6	F T T T	R11 R23 R24 R25 R39	H225 H301 H311 H331, H370

## \*\*\*\* 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 5 minutes. If necessary, eye rinsing solution. Consult an ophthalmologist.

**Skin:** Flush skin with plenty of soap and water. Consult a doctor in the event of persistent skin irritation.

**Ingestion:** Do not induce vomiting. If conscious, allow the victim to rinse his mouth and then to drink plenty of water in small sips. Consult a physician immediately.

**Inhalation:** Remove from exposure to fresh air. In case of persistent discomfort, get medical attention immediately.

### 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.

Treatment: 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

## \*\*\*\* 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 water spray, carbon dioxide, or dry chemical powder, or appropriate foam.

**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:** Vapors are heavier than air and may travel to a source of ignition and flash back. Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge.

**Flash point:** 14 °C (58 °F)

**Auto-ignition temperature:** 425°C(797 °F)

**Explosion Limits, Lower:** 5.5 %(V)

Upper: 44 %(V)

**HMIS Classification**

**NFPA Rating**

Health

2

Health

2

Flammability

3

Fire

3

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

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## \*\*\*\* 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 swallow. Avoid breathing vapor. Avoid contact with skin and clothing. Wash thoroughly after handling.

Keep away from sources of ignition – No smoking. Take precautionary measures against static discharges. Product may charge electrostatically during pouring or filling. All equipment used when handling the product must be grounded.

**Storage:** Keep containers tightly closed in a cool, dry, well-ventilated place. Protect from moisture. Comply with storage regulations prohibiting storage of hazardous substances in non-stationary containers in the same room

## \*\*\*\* 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:** Use chemical worker's goggles.

**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.

**Skin:** Wash at mealtime and end of shift. If skin contact occurs, change contaminated clothing as soon as possible and thoroughly flush affected areas with cool water. Chemical protective gloves are recommended.

Hand protection / protective gloves

Recommended order of use:

4H

Butyl

Neoprene

Nitrile (NBR)

PVC-coated

Other protective equipment

Chemical apron

Eye bath

Safety shower

**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.

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

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

Appearance: Colorless to light brown liquid.

Odor: Alcoholic

pH: N/A.

Vapor pressure: ca. 120 hPa @ 20°C

Vapor density: >1

Evaporation rate: 5.90

Viscosity: N/A.

BP/BP Range: 64.5 °C

Freezing/Melting Point: N/A.

Decomposition Temperature: N/A.

Solubility: Partly miscible, partial decomposition by hydrolysis.

Specific gravity (H<sub>2</sub>O=1): 0.920 g/cm<sup>3</sup> @ 20°C

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

**Chemical Stability:** Vapors may form explosive mixture with air.

**Conditions to Avoid:** Acids, Acid chlorides, Acid anhydrides, Oxidizing agents, Reducing agents, Alkali metals.

**Materials to Avoid:** Inorganic halides, strong oxidizing agents.

**Hazardous decomposition products:** Carbon monoxide, Carbon dioxide, Nitrogen oxides, Silicon oxide under fire or very high heat condition.

**Hazardous Polymerization:** Has not been reported

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

Acute oral Toxicity: LD<sub>50</sub> Rat, >2,000 mg/kg, slightly toxic.

Acute dermal toxicity: LD<sub>50</sub> Rabbit, >2,000 mg/kg, slightly toxic.

Skin Irritation: Rabbit, slightly irritating.

Eye irritation: Rabbit, slightly irritating.

Human experience: Liver and kidney injuries may occur

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

The product degrades through hydrolysis into alcohols and silanol and/or siloxanol compounds

## \*\*\*\* 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 \*\*\*\*

Shipping Name: FLAMMABLE LIQUID, TOXIC, N.O.S. CONTAINS METHANOL

Technical name: (3-Ureidopropyltrialkoxysilane in methanol)

DOT	Class	UN	PG		PI
	3(6.1)	1230	II		
IATA/ICAO	Class	UN/ID	PG		PI
	3(6.1)	1230	II		
IMDG	Class	UN	PG	EmS	PI
	3(6.1)	1230	II	F-E,S-D	

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RID/ADR	Class	UN	PG		PI
	3(6.1)	1230	II		

Keep separate from foodstuffs, luxury foods, feedstuffs

## \*\*\*\* 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: F Highly Flammable.

T Toxic.

Risk Phrases: R11 Highly flammable.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Safety Phrases: S7 Keep container tightly closed.

S16 Keep away from sources of ignition - No smoking.

S36/37 Wear suitable protective clothing and gloves.

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

### 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