

# 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

## n-Propyltrimethoxysilane [ Organosilane NPMO ]

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

SDS Name: **n-Propyltrimethoxysilane (Organosilane NPMO)**

Chemical Name: n-Propyltrimethoxysilane, 98%

Synonym(s): n-Propyltrimethoxypropylsilane

IUPAC NAME: trimethoxy(propyl)silane

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 3	H226
Skin Irritation	Category 2	H315

#### GHS-Labeling:

Globally Harmonized System of Classification and Labelling (GHS)

Symbol(s):



Hazard Pictogram: GHS02; GHS07  
Signal Word: Warning

Hazard Statement:	H226 H315	Flammable liquid and vapor. Causes skin irritation.
Precautionary Statement:	P210 P243 P264 P280 P302+P352 P332+P313 P362	Keep away from heat/sparks/open flames/hot surfaces. No smoking. Take precautionary measures against static discharge. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

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-Propyltrimethoxysilane, 98% min.	1067-25-0	213-926-7	F Xi	R10 R38	H226 H315

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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 5 minutes, occasionally lifting the upper and lower lids, if necessary, eye rinsing solution. In case of persistent discomfort, consult an ophthalmologist.

**Skin:** Flush skin with plenty of soap and water at once. If skin irritation persists, get medical attention.

**Ingestion:** Have the mouth rinsed with water if patient is conscious. Consult a physician immediately.

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

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

After absorbing large amounts of substance, liberation of reaction products can lead to symptoms of poisoning. Immediate gastric lavage. Antidote treatment, correction of acid-base balance

## \*\*\*\* 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, 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:** Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding or inert gas purge. Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Silica, Carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde, Chlorine compounds.

**Flash Point:** 36°C (97°F).

**Auto-ignition temperature:** 245°C (473°F)

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

Upper: N/A

**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

## \*\*\*\* 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 breathe vapor. Do not breathe spray or mist. Avoid skin and eye contact. Do not ingest. Do not empty into drains.

Take precautionary measures against static discharges. Keep away from sources of ignition – No smoking. Explosion protection equipment required. Avoid spark production through cutting, grinding, or welding work in the area of the container.

**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 made from non-flammable fibres.

**Respirators:** Wear a NIOSH/MSHA or European Standard EN 149 approved full-face piece airline respirator in the positive pressure mode with emergency escape provisions.

**Hygiene measures:** When using, do not eat, drink or smoke. Wash face and hands before break and end of work. Remove and 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

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

**Appearance:** Colorless and transparent liquid

**Odor:** Alcoholic

**pH:** N/A.

**Vapor Pressure:** 93 hPa @ 20°C

**Vapor Density:** N/A

**Evaporation Rate:** N/A.

**Viscosity:** 5 cSt @ 25°C

**BP/BP Range:** 141°C

**Freezing/Melting Point:** N/A.

**Decomposition Temperature:** N/A.

**Solubility In Water:** not miscible, decomposition by hydrolysis.

**Specific Gravity:** 0.938g/cm<sup>3</sup> @ 25°C

**Molecular Formula:** C<sub>6</sub>H<sub>16</sub>O<sub>3</sub>Si

**Molecular Weight:** 164.28

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

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Keep away from heat and sources of ignition. Vapors can form explosive mixtures with air.

**Materials to Avoid:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Methanol in case of hydrolysis.

**Hazardous Polymerization:** Has not been reported

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

**Acute oral toxicity:** LD<sub>50</sub> Rat: >5,170 mg/kg.

**Acute Inhalation toxicity:** LC<sub>50</sub> Rat: 22.2 mg/l/4h/Aerosol

**Skin irritation:** Rabbit, irritating.

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

**Sensitization:** Guinea pig, no sensitizing effects

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

**Biodegradability:** 54% Not readily biodegradable

**Toxicity to fish:** LC<sub>0</sub> Brachydanio rerio: ≥746 mg/l/96h

**Toxicity to daphnia:** EC<sub>50</sub> Daphnia magna: >816 mg/l/48h

**Toxicity to algae:** EC<sub>50</sub> scenedesmus subspicatus: >913 mg/l/72h

This product hydrolyses in water or moist air, releasing methanol and organosilicons

**SDS: ORGANOSILANE NPMO**

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## \*\*\*\* 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, N.O.S.

Technical name: n-Propyltrimethoxysilane

DOT	Class	UN	PG		PI
	3	1993	III		
IATA/ICAO	Class	UN/ID	PG		PI
	3	1993	III		
IMDG	Class	UN	PG	EmS	PI
	3	1993	III	F-E,S-E	
RID/ADR	Class	UN	PG		PI
	3	1993	III		

## \*\*\*\* 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 Flammable liquid.

Xi Irritant.

Risk Phrases: R10 Flammable.

R38 Irritating to skin.

Safety Phrases: S16 Keep away from sources of ignition.

S33 Take precautionary measures against static discharges.

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

### 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