

SAFETY DATA SHEET

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

ONICHEM
Onichem Specialities
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Methyltrimethoxysilane [Organosilane MMO]

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

SDS Name: **Methyltrimethoxysilane (Organosilane MMO)**

Chemical Name: Methyltrimethoxysilane, 99%

Synonym(s): trimethoxy(methyl)silane

IUPAC Name: trimethoxy(methyl)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 2 H225

Skin Sensitisation Category 1 H317

GHS-Labeling:

Globally Harmonized System of Classification and Labelling (GHS)

Symbol(s):



Hazard Pictogram: GHS02; GHS07

Signal Word: Danger

Hazard Statement: H225 Highly flammable liquid and vapor.
H317 May cause an allergic skin reaction.

Precautionary Statement: P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P243 Take precautionary measures against static discharge.
P272 Contaminated work clothing should not be allowed out of the workplace.
P302+P352 IF ON SKIN: Wash with soap and water.
P333+P313 IF skin irritation or rash occurs: Get medical advice/attention.
P403+P235 Store in a well ventilated place. Keep cool

Other Hazards Not a PBT, vPvB substance as per the criteria of the REACH Ordinance.

**** SECTION 3—COMPOSITION / INFORMATION ON INGREDIENTS ****

Ingredient (Chemical Name)	CAS#	EC#	Symbol(s)	R-phrase(s)	Hazard statements
Methyltrimethoxysilane, 99% min.	1185-55-3	214-685-0	F Xi	R11 R43	H225 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. Obtain medical attention if discomfort persists.

Skin: Flush skin with plenty of soap and water while removing contaminated clothing and shoes.

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

Inhalation: Remove from exposure to fresh air immediately. If symptoms persist, consult a physician for treatment.

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: Immediate gastric lavage. Antidote treatment, correction of acid-base balance.

Detection of substance(Methanol) possible in: Blood.

Antidote treatment: Ethanol.

Allergic reactions cannot 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: Water spray, foam, carbon dioxide, dry chemical.

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: 9°C (48.2°F),

Auto-ignition temperature: 238°C (460°F)

Explosion Limits, Lower: 1.5%,

Upper: 10.4%

HMIS Classification

NFPA Rating

Health 2

Health 3

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: Avoid contact with eyes, skin, and clothing. Do not breathe vapor. Provide good ventilation or extraction. Take precautionary measures against static charges, keep away from sources of ignition. Explosion protection equipment required. Danger of explosion from residual product fumes; therefore avoid spark production through cutting, grinding, or welding work in the area of the container, When repairs of the production system are to be made, the section to be repaired must be essentially free of product.

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

**** 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.

Hand: Selection of protective gloves to meet the requirements of specific workplaces. Suitability for specific workplace should be clarified with protective glove manufacturers.

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: Exercise good industrial hygiene practice. Wash after handling, especially before eating, drinking or smoking. Remove contaminated clothing immediately. 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

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

Appearance: Colorless and transparent liquid.

Odor: Characteristic odor.

pH: N/A.

Vapor Pressure: 106.6 hPa @20°C

Vapor Density: > 1

Evaporation rate: < 1

Viscosity: 0.5 mPa.s @ 20°C

BP/BP Range: 102 °C

Freezing/Melting Point: <-77 °C

Decomposition Temperature: N/A.

Solubility: not miscible, decomposition by hydrolysis.

Specific Gravity/Density: 0.955 g/cm³ @20°C

Molecular Formula: C₄H₁₂O₃Si

Molecular Weight: 136.22

**** 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 acids, strong oxidizing agents.

Hazardous Decomposition Products: Methanol in case of hydrolysis.

Hazardous Polymerization: Will not occur

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

Acute oral toxicity: LD₅₀ Rat: 7,000mg/kg

Acute inhalation toxicity: LC₅₀ Rat: >42.1 mg/l/4h/vapor

Acute dermal toxicity: LD₅₀ Rabbit: >9,600mg/kg

Skin/Eye irritation: Rabbit, not irritating.

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

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

**** 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: Methyltrimethoxysilane

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

**** 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.

Xi Irritant.

Risk Phrase(s): R11 Highly flammable.

R43 May cause sensitization by skin contact.

Safety Phrase(s): S9 Keep container in a well-ventilated place.

S16 Keep away from sources of ignition - no smoking.

S24 Avoid contact with skin.

S29 Do not empty into drains.

S33 Take precautionary measures against static discharges.

S51 Use only in well-ventilated areas.

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

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**** SECTION 16 - OTHER 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