

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 PMO

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

SDS Name: **Organosilane PMO**

Chemical Name: Phenyltrimethoxysilane, 97%

Synonym(s): trimethoxyphenylsilane

IUPAC Name: trimethoxy(phenyl)silane

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 - 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

Specific Target Organ Toxicity Category 2 H373

GHS-Labeling:

Globally Harmonized System of Classification and Labelling (GHS)

Symbol(s):



Hazard Pictogram: GHS08

Signal Word: Warning

Hazard Statement:	H302 H373	Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure.
Precautionary Statement:	P270 P314 P302+P352 P332+P313 P403+P235	Do not eat, drink or smoke when using this product. Get Medical advice/attention if you feel unwell. IF ON SKIN: Wash with soap and water. If skin irritation on occurs: Get medical advice/attention. Store in a well-ventilated place. Keep cool.
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-pharse(s)	Hazard statements
Phenyltrimethoxysilane, 97% min.	2996-92-1	221-066-9	Xn	R22 R48	H302 H373

**** 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. In case of persistent discomfort, consult an ophthalmologist.

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Skin: Flush skin with plenty of soap and water while removing contaminated clothing and shoes. Consult a doctor in the event of persistent skin irritation.

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

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.

Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO₂), dry chemical or water spray.

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 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: 85°C (185°F)

Auto-ignition temperature: Not determined.

Explosion Limits, Lower: N/A,

Upper: N/A

NFPA: N/A

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. Keep away from sources of ignition. When repairs of the production system are to be made, the section to be repaired must be essentially free of product.

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

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Component Exposure Limits

CAS #	Component Name	Exposure Limits
2996-92-1	Phenyltrimethoxysilane	TWA 50 ppm
67-56-1	Methyl alcohol	OSHA PEL (final rule): TWA 200 ppm, 260 mg/m ³ ACGIH TLV-skin: TWA 200 ppm, STEL 250 ppm
17865-54-2	Alkyl methoxy silane	Refer to methyl alcohol
3027-21-2	Phenylmethyldimethoxysilane	Refer to methyl alcohol

Methyl alcohol forms on contact with water or humid air. Provide adequate ventilation to control exposures within guidelines of OSHA PEL: TWA 200 ppm and ACGIH TLV-skin: TWA 200 ppm, STEL 250 ppm.

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Engineering Controls

Local Ventilation: Recommended.

General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling

Eyes: Use proper protection - safety glasses as a minimum.

Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Suitable Gloves: Silver Shield(R). 4H(R).

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.

Suitable Respirator: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits as determined by air sampling or are unknown, appropriate respiratory protection should be worn. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

Personal Protective Equipment for Spills

Eyes: Use full face respirator.

Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Inhalation/Suitable Respirator:

Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Precautionary Measures: Avoid eye contact. Avoid skin contact. Do not breathe vapor. Keep container closed.

Do not take internally. Use reasonable care.

Comments: Product evolves flammable methyl alcohol when exposed to water or humid air.

Provide ventilation during use to control exposure within Section 8 guidelines or use air-supplied or self-contained breathing apparatus. Traces of benzene (carcinogen) may form if heated in air above 300 F (149 C). Provide ventilation to control vapor exposure within inhalation guidelines when handling at elevated temperatures. Review the OSHA benzene regulation for detailed information on safe handling requirements.

When heated to temperatures above 150 degrees C in the presence of air, product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer, and an irritant to the eyes, nose, throat, skin, and digestive system. Safe handling conditions may be maintained by keeping vapor concentrations within the OSHA Permissible Exposure Limit for formaldehyde.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

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: Colorless and transparent liquid.

Odor: Not available

pH: N/A.

Vapor Pressure: ca. 27 hPa @108°C

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Vapor Density: N/A.
Evaporation Rate: N/A.
Viscosity: 1.7cSt @ 25°C
BP/BP Range: 211 °C
Freezing/Melting Point: N/A.
Decomposition Temperature: N/A.
Solubility: Not miscible, decomposition by hydrolysis.
Specific Gravity/Density: 1.060 g/cm³ @ 20°C
Molecular Formula: C₉H₁₄O₃Si
Molecular Weight: 198.29

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

Chemical Stability: Stable under normal usage conditions.

Conditions to Avoid: Keep away from heat and sources of ignition.

Materials to Avoid: Oxidizing material can cause a reaction. Water, moisture, or humid air can cause hazardous vapors to form as described in Section 8.

Hazardous decomposition products: 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. Methanol in case of hydrolysis.

Hazardous Polymerization: Hazardous polymerization will not occur

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

Acute oral toxicity: LD₅₀ Rat: 1049 mg/kg

Acute inhalation toxicity: N/A

Acute dermal toxicity: N/A

Skin irritation: Rabbit, irritating

Eye irritation: Rabbit, not irritating

Sensitization: Buehler Test guinea pig: No sensitizing effects.

Carcinogenicity: Phenyltrimethoxysilane -Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA

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

There is no information available

**** 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, IMDG, ADR/RID, IATA/ICAO

**** 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: Xn Harmful.

Risk Phrases: R22 Harmful if swallowed.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

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Safety Phrases:	S7 S36/37/39	Keep container tightly closed. Wear suitable protective clothing, gloves and eye/face protection.
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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