

**Section 1. Identification**

**Product Name:** ROYALSIL HI-PURITY MOS-NH

**Product Use:** MOS is a neutral curing agent and crosslinking agent used in sealant formulation.

**Effective Date:** 21 May 2019

**Replaces:** 3 March 2018

**Supplier Information:**

ROYALSIL, Inc.  
25 Lancelot Lane  
Mount Laurel, NJ 08054-1912

**USA Emergency Phone Number:**

**CHEMTREC (24-hr/7 days): 1-800-424-9300**

**Refer to ROYALSIL, Inc. Contract # CCN674872.**

**Section 2. Hazard(s) Identification**

**Emergency Overview:** Clear to straw color liquid. Causes mild skin irritation. Cause serious eye damage. Harmful to aquatic life.

**GHS Classification:**

<b>Eye irritation</b>	<b>Category 1</b>
<b>Skin Sensitization</b>	<b>Category 1</b>
<b>Skin Irritation</b>	<b>Category 2</b>
<b>Carcinogenic</b>	<b>Category 2</b>
<b>Acute Toxicity Oral</b>	<b>Category 4</b>



**GHS Pictograms:**

**GHS Label: DANGER**

**POTENTIAL HEALTH EFFECTS:**

**CODE OF HAZARD STATEMENTS:**

**Physical Hazards**

**Health Hazards**

H302- Harmful if swallowed.

H315- Causes skin irritation.

H318- Causes serious eye damage.

H332- Harmful if inhaled.

H351- Suspected of causing cancer.

**Environmental Hazards**

H402- Harmful to aquatic life.

**CODE OF PRECAUTIONARY STATEMENTS:**

**General**

P101- Keep out of reach of children.

P103- Read label before use.

**Prevention Statements**

P202- Do not handle until all safety precautions have been read and understood.

P261- Avoid breathing dust/fume/gas/mist/vapor/spray.

P262- Do not get in eyes, on skin or on clothing.

P264- Wash thoroughly after handling using this product.

P270- Do not eat, drink, or smoke when using this product.

P271- Use only outdoors or in a well-ventilated area.

P273- Avoid release to the environment.

P280- Wear protective gloves/protective clothing/eye protection/face protection.

**Response Statements**

P302- P352- IF ON SKIN (or hair): wash with plenty water/soap.

P304- P312- P340 - IF INHALED. Remove victim to fresh air and keep at rest in position comfortable and breathing. Call a POISON CENTER or doctor/physician you feel unwell.

P305- P310- P338- P351 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POSION CENTER or doctor/physician if you feel unwell.

P333- P313- If skin irritation or rash occurs: Get medical advice/attention.

P363- Wash contaminated clothing before reuse.

P370- P378- In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

**Storage**

P235- P403- Store in well-ventilated place. Keep cool.

**Disposal**

P501- Dispose of contents/container to an approved waste disposal plant.

**ROUTES OF ENTRY:** Eye contact, skin adsorption, ingestion and inhalation.

**CARCINOGENICITY:** May cause cancer.

**Section 3. Composition/Information on Ingredients**

Ingredients	CAS No.	EINECS No.	%	Reach No.
Methyltris(methylethylketoxime)silane	22984-54-9	245-366-4	≥95%	No
Methylethylketoxime	96-29-7	202-496-6	< 2%	Yes

**Section 4. First Aid Measures**

**General Advice:** In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.

**Eye Contact:** Flush eyes with water immediately while holding eyelids open. Remove contacts, if worn, after initial flushing and continue flushing for at least 15 minutes. Seek medical attention if irritation persists.

**Skin Contact:** Use soap and water to remove from the skin, remove contaminated clothing, clean thoroughly before reuse. If irritation persists, contact a physician.

**Inhalation:** Move to fresh air. If not breathing, give rescue breathing. If breathing is difficult, give oxygen. Seek medical attention if breathing is still difficult.

**Ingestion:** If swallowed, get medical attention immediately. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person.

**Note to Physician:** Treat symptomatically and supportively.

### Section 5. Fire Fighting Measures

**Flash Point:** 223°F (106°C) Combustible liquid

**Flammability Limits:** LEL: ND UEL: ND

**Fire Fighting Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special Fire Fighting Procedures:** This product may produce explosive mixtures with air. First responders need to wear full-bunker gear with Self Contained Breathing Apparatus (SCBA), never enter a confined space unless fully protected with proper personal protective equipment (PPE).

### Section 6. Accidental Release Measures

Use personal protective equipment, see section 8.

**Clean-up Procedures:** This product may cause explosive mixtures with air. Avoid open flames, sparks and heat sources when cleaning up the absorbed material. Stop the source of the release if you are not put at risk. Use inert absorbent material (such as earth, diatomaceous earth, vermiculite) to absorb the spill, use non-sparking shovel to pick up absorbent for disposal. Assure sufficient ventilation.

**Spills and Leaks:** Dispose in accordance to local, state or Federal regulations.

### Section 7. Handling and Storage

**Handling:** Provide good ventilation. Wear personal protective equipment, see section 8. Do not get into eyes, on skin and on clothing. Do not breathe vapors or mists. Use with adequate ventilation. Wash thoroughly after handling.

**Storage:** Store in original labeled container. Keep in cool and dry areas.

**Section 8. Exposure Controls/Personal Protection**

**Introductory Remarks:** Use process exposures such as local exhaust ventilation or other engineering controls to minimize airborne exposure. A safety shower and eye wash should be readily available.

The permissible exposure limits (PEL) for methanol is 260 mg/m<sup>3</sup>.

**Personal Protection:**

**Eyes:** Wear safety goggles or face shield to prevent eye contact.

**Body:** Chemical apron, long sleeve shirts, long pants, socks, and rubber boots.

**Hands:** Chemical resistant gloves.

**Respiratory:** Wear an approved respirator that provides protection from this product if the airborne concentrations exceed the recommended exposure limits.

**Section 9. Physical and Chemical Properties**

<b>Physical State, Color, Odor</b>	Clear to straw color liquid with mild odor	<b>Freezing Point</b>	-108.4°F (-22°C)
<b>Flash Point</b>	223 °F (106°C)	<b>Boiling Point</b>	215.6°F (110°C)
<b>Density(water=1)</b>	0.98 g/ml @ 77°F (25°C)	<b>Relative Vapor Density</b>	>1 at 68°F (20°C)
<b>VOC Content</b>	<5%	<b>pH</b>	7

**Section 10. Stability and Reactivity**

**Chemical Stability:** Considered stable under normal ambient temperatures.

**Hazardous Decomposition:** In complete combustion, oxides of carbon, nitrogen and silicate are formed. Methanol and methylethylketone are formed.

**Hazardous Polymerization:** Will not occur.

**Incompatibility- Materials to Avoid:** Reacts with strong acids, bases and water.

**Section 11. Toxicological Information**

**Toxicology:** Acute Oral LD<sub>50</sub> (rat) => **930 mg/KG**

Acute Dermal LD<sub>50</sub> (rabbit) = > **0.2 mg/KG**

Acute Inhalation LC<sub>50</sub> (rat) = > **42.1 mg/L (4 hours)**

**Skin Irritation:** Mildly irritating.

**Eye Irritation:** Can cause serious damage to eyes.

**Acute Inhalation Toxicity:** Expected to be an irritant to the respiratory system.

**Reproductive Toxicity:** No evidence of adverse effects on sexual function and fertility or on development, based on animal experiments.

**Carcinogenic Effects:** Suspected of causing cancer.

**Section 12. Ecological Information**

**Ecotoxicity:** LD<sub>50</sub> (Rainbow trout) = > 110 mg/L (96 hours)

EC<sub>50</sub>(Green algae) = > 120 mg/L (30 days)

EC<sub>50</sub>(Daphnia)= > 122 mg/L (48 hours)

This is toxic to aquatic organisms.

**Environmental Fate:** Ingredients are not readily bio degradable. Expect low mobility in soil.

**Section 13. Disposal Considerations**

**Waste Disposal Method:** Whatever cannot be saved for recovery or recycling should be managed by the local, state or Federal Regulations.

**Container Handling and Disposal:** All containers should be triple rinsed and disposed of according to local, state and Federal regulations.

**Section 14. Transport Information**

**Shipping Name:** ROYALSIL HI-PURITY MOS-NH

**Proper Shipping Description (Ground):**

Not regulated.

**IATA: (Cargo aircraft only)**

Not regulated.

**IMO (Water):**

Not regulated.

**Section 15. Regulatory Information**

**EPCRA 311/312 Categories:** Immediate (Acute) Health Effects: Yes

Delayed (Chronic) Health Effects: No

Fire Hazard: No

Sudden Release of Pressure: No

Reactivity: No

**Right to know classification:** Both ingredients are listed in the states of NJ and PA.

**TSCA:** Methyltris(methylethylketoxime)silane and are listed on TSCA active inventory list.

**Reportable Quantity (RQ):** None.

**Prop. 65:** Methanol is a developmental toxic and can cause birth defects.

**WHMIS:** None.

These ingredients are listed in the DSL and NDSL list in Canada.

Compound is listed as chemical inventories of Australia, Canada, China, EU, Japan, Korea, Philippines, United States of America.

**Abbreviations:**

---

CAS #	Chemical Abstract Service Number		
°C	Celsius Temperature Scale	°F	Fahrenheit Temperature Scale
EINECS #	European Inventory of Existing Chemical Substances Number		
hPa	hectopascal	LD <sub>50</sub>	Lethal Dose Oral or Dermal
LC <sub>50</sub>	Lethal Inhalation	LEL	Lower Explosive Limit
UEL	Upper Explosive Limit	PEL	Permissible Exposure Limit
PPE	Personal Protective Equipment	Prop.	Proprietary
PSI	Pounds Per Square Inch	NA	Not Applicable
ND	Not Determined	STEL	Short Term Exposure Limit
TLV	Threshold Limit Value	TSCA	Toxic Substance Control Act
TWA	Time Weighted Average		

---

**Section 16. Other Information**

**Hazardous Material Information System**

**National Fire Protection Association**

HMIS		NFPA	
2	Health	2	Health
2	Fire	2	Fire
1	Reactivity	1	Instability
H	Personal Protection		NA

Health	4 Deadly	3 Extreme Danger	2 Dangerous	1 Slight hazard	0 No hazard
Fire	4 < 73 °C	3 < 100 °C	2 < 200 °C	1 >200 °C	0 Will not burn
Reactivity/ Instability	4 May detonate	3 Explosive	2 Unstable	1 Normally stable	0 Stable

**Prepared by: Dennis E. Belau**

**Reviewed by: Rosario A. Licciardello**  
**ROSARIO@ROYALSIL.com**

This Safety Data Sheet (SDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) this product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all information required by CPR.

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee, expressed or implied, is made as to its accuracy, reliability or completeness.

It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own use. We do not accept liability for any loss or damage that may occur from the use of this information.

Nothing herein shall be construed as a recommendation for uses which infringe on valid patents or as extending the license under valid patents. This SDS provides selected regulatory information on this product, including its components.

This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws related to the product being used.

#### **DISCLAIMER**

Strictly for Commercial or Research and Development use only. Not intended for drug, household or other noncommercial uses.

The use of "Qualitative Determinations of Organosilanes" is subject to many variables which can be environmentally or human caused which may allow the reading of results to be inaccurate. The user of this information takes full responsibility in how these tests are performed and the seller in no way expressed, written or implied is responsible for the interpretation of the results. All use of these tests is the full responsibility of the user.

#### **WARRANTY**

The information above in the Safety Data Sheet is believed to be accurate and represents the best information currently available to ROYALSIL Inc and its supplier.

However, we make no warranty of merchantability or any other warranty, expressed 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 purposes. In no event shall ROYALSIL Inc. or its supplier 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, how so ever arising, even if ROYALSIL Inc and its supplier has been advised of the possibility of such damages. (REV: 9-4-16)