

**Section 1. Identification**

**Product Name:** ROYALSIL HI-PURITY VTEO

**Product Use:** For Industrial Use Only. Adhesion promoter and interface additive for coatings. Sizing agent for glass fibers in reinforcement and insulation.

**Effective Date:** 5 May 2017

**Replaces:** 8 April 2015

**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:**

**Skin Irritation**  
**Flammable Liquid**

**Category 2B**  
**Category 3**



**GHS Pictograms:**

**GHS Label: DANGER**

**POTENTIAL HEALTH EFFECTS:**

**CODE OF HAZARD STATEMENTS:**

**Physical Hazards**

H226- Flammable Liquid and vapor.

**Health Hazards**

H226- Flammable Liquid and vapor.

H303- May be harmful if swallowed.

H314- Causes severe skin burns and eye damage.

H317- May cause an allergic skin reaction

H320- Causes eye irritation.

H332- Harmful if inhaled.

**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.

P210- Keep away from heat, open flames, sparks – NO SMOKING.

P233- Keep container tightly closed.

P240- Ground/bond container and receiving equipment.

P241- Use explosion-proof electrical equipment.

P242- Use only non-sparking tools.

P243- Take precautionary measures against static discharge.

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 apposition 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.

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:** None.

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

Ingredients	CAS No.	EINECS No.	%	Reach No.
Vinyltriethoxysilane	78-08-0	201-081-7	≥95%	No
Ethanol	64-17-5	206-578-6	≤5%	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:** 111.22°F (44°C) Flammable liquid

**Flammability Limits:** LEL: >1.3% UEL: <1.7

**Fire Fighting Media:** Use water spray, water fog, dry chemical or carbon dioxide.

**Special Fire Fighting Procedures:** Eliminate all sources of ignition, sparks and open flames and ensure adequate ventilation. In case of fire cool endangered containers with water. 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:** Avoid cutting the containers, ground to avoid explosive gases. 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 a local exhaust ventilation or other engineering controls to minimize airborne exposure. A safety shower and eye wash should be readily available.

**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>Color and Odor</b>	Clear to straw color liquid with mild odor	<b>Density(water=1)</b>	0.91 g/ml @ 68°F (20°C)
<b>Flash Point</b>	111.2°F (44°C)	<b>Boiling Point</b>	320°F (160°C)
<b>Auto-ignition Temperature</b>	500°F (268°C)	<b>VOC</b>	100%

**Section 10. Stability and Reactivity**

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

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

**Hazardous Polymerization:** Will not occur.

**Incompatibility- Materials to Avoid:** Reacts with strong oxidizing agent, organic peroxides, flammable solids, pyrophoric solids & liquids, flammable gases and water.

**Section 11. Toxicological Information**

**Toxicology: Acute Oral LD<sub>50</sub>(rat) => 500 mg/KG**

**Acute Dermal LC<sub>50</sub>(rabbit) => 2,000 mg/KG**

**Skin Irritation:** Mild irritant.

**Eye Irritation:** Mild irritation to eyes.

**Inhalation:** May cause irritation to respiratory tract.

**Ingestion:** May be harmful if swallowed

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

**Carcinogenic Effects:** None.

**Section 12. Ecological Information**

**ECOTOICITY:** LD<sub>50</sub>(Zebra fish) => **92.1 mg/L 96 hours**

EC<sub>50</sub> (Daphnia) => **89 mg/l 48 hours**

**Environmental Fate:** Ingredients are readily bio degradable.

**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 VTEO

**Proper Shipping Description (Ground):**

UN1993, Flammable liquids, N.O.S., (Vinyltriethoxysilane) 3, III

**IATA: (Cargo aircraft only)**

UN1993, Flammable liquids, N.O.S., (Vinyltriethoxysilane) 3, III

Use packing instruction 366. Net capacity of container is 58.2 gallons (220L).

**IMO (Water):**

UN1993, Flammable liquids, N.O.S., (Vinyltriethoxysilane) 3, III

**Section 15. Regulatory Information**

**EPCRA 311/312 Categories:** Immediate (Acute) Health Effects: Yes  
Delayed (Chronic) Health Effects: No  
Fire Hazard: Yes  
Sudden Release of Pressure: No  
Reactivity: No

**Right to know classification:** Both ingredients are listed in PA.

**TSCA:** Not listed.

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

**Prop. 65:** None.



**WHMIS:** Flammable and Combustible materials.  
Both ingredients are listed in the DSL and NDSL list in Canada.

Compounds are listed as chemical inventories of Australia, Canada, Germany, Israel, Japan, Korea, Philippines, United Kingdom and 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 Dose 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	
1	Health	1	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

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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.

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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.

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