



Material Safety Data Sheet WD-V4

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Triethoxyvinylsilane, 98%

Synonyms: VTEO

Company name: WUHAN UNIVERSITY SILICONE NEW MATERIAL CO., LTD.

Telephone: +86-27-87215023 Fax: +86-27-68754159

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
78-08-0	Triethoxyvinylsilane	98	201-081-7

Hazard Symbols: None Listed.

Risk Phrases: 10

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: colorless liquid.

Flash Point: 34 deg C.

Warning! Flammable liquid and vapor. Causes respiratory tract irritation. May cause digestive tract irritation.

Moisture sensitive. May cause central nervous system depression. Causes eye and skin irritation.

Target Organs: Kidneys, central nervous system, eyes.

Potential Health Effects

Eye: Causes mild eye irritation. May cause chemical conjunctivitis and corneal damage.

Skin: Causes mild skin irritation. May cause cyanosis of the extremities.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Ingestion of large amounts may cause CNS depression.

Inhalation: Causes respiratory tract irritation. Vapors may cause dizziness or suffocation. Can produce delayed pulmonary edema. May cause burning sensation in the chest.

Chronic: Prolonged or repeated skin contact may cause dermatitis. Effects may be delayed.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If



breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Use agent most appropriate to extinguish fire. Do NOT use straight streams of water.

Autoignition Temperature: Not applicable.

Flash Point: 34 deg C (93.20 deg F)

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 3; Instability: 0

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

**** SECTION 7 - HANDLING and STORAGE ****

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation.

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

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

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility



and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Triethoxyvinylsilane	none listed	none listed	none listed

OSHA Vacated PELs:

Triethoxyvinylsilane:

No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

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

Physical State: Liquid

Color: colorless

Odor: None reported.

pH: Not available.

Vapor Pressure: 24 hPa @ 61 deg C

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 160 - 161 deg C @ 760.00 mmHg

Freezing/Melting Point: Not available.

Decomposition Temperature:

Solubility in water: decomposes

Specific Gravity/Density: 0.9045 g/cm³

Molecular Formula: C₈H₁₈O₃Si

Molecular Weight: 190.4

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

Chemical Stability: Stable under normal temperatures and pressures. Moisture sensitive.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat, strong oxidants.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, silicon oxide.

Hazardous Polymerization: Has not been reported.



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

RTECS#:

CAS# 78-08-0: VV6700000

LD50/LC50: Not available.

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

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: No information available.

Other Studies: Open irritation test: Administration onto the skin (rabbit) = 500 mg (Mild). Standard Draize Test: Administration into the eye (rabbit) = 500 mg/24H (Mild).

**** SECTION 12 - DISPOSAL CONSIDERATIONS ****

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

**** SECTION 13 - TRANSPORT INFORMATION ****

US DOT

Shipping Name: FLAMMABLE LIQUID, N.O.S.*

Hazard Class: 3

UN Number: 1993

Packing Group: III

Canadian TDG

No information available.

**** SECTION 14 - REGULATORY INFORMATION ****

US FEDERAL

TSCA

CAS# 78-08-0 is listed on the TSCA inventory.

Health & Safety Reporting List: None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules: None of the chemicals in this product are under a Chemical Test Rule.

Section 12b: None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule: None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs: None of the chemicals in this material have an



RQ.

SARA Section 302 Extremely Hazardous Substances: None of the chemicals in this product have a TPQ.

Section 313: No chemicals are reportable under Section 313.

Clean Air Act: This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

Triethoxyvinylsilane is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Risk Phrases: R 10 Flammable.

Safety Phrases: S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

WGK (Water Danger/Protection)

CAS# 78-08-0: No information available.

United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits

Canada

CAS# 78-08-0 is listed on Canada's DSL List. This product has a WHMIS classification of B2, D2B. CAS# 78-08-0 is not listed on Canada's Ingredient Disclosure List. Exposure Limits

**** SECTION 15- ADDITIONAL INFORMATION ****

MSDS Creation Date: 13/02/2007 Revision #1 Date: 21/07/2009

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 the company 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 the company has been advised of the possibility of such damages.