SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier: VPS SIVO 280

Chemical name:
Organofunctional polysiloxane, modified

Other means of identification

Recommended restrictions

Recommended use: For industrial use Coupling agent Cross-linking agents Surface modifier
Restrictions on use: Not determined.

Manufacturer/Importer/Distributor Information

Company Name	:	Evonik Corporation 299 Jefferson Road Parsippany, NJ 07054 USA
Telephone	:	+1 973 929 8000
Fax	:	+1 973 929 8040
E-mail	:	product-regulatory-services@evonik.com

Emergency telephone number:

24-Hour Health Emergency	:	+1 800 424 9300 (CHEMTREC - US & CANADA) +1 800 681 9531 (CHEMTREC MEXICO) +1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Serious eye irritation	Category 2A
Skin sensitizer	Category 1

Label Elements

Hazard Symbol:

Signal Word: Warning

Hazard Statement: May cause an allergic skin reaction.
Causes serious eye irritation.

Precautionary Statements

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves.

Response: IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Wash contaminated clothing before reuse.

Disposal: Dispose of contents/ container to an approved waste disposal plant.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Chemical name:
Organofunctional polysiloxane, modified

Substances

Composition information of impurities and stabilizers

Chemical Identity	CAS number	Content in percent (%)*

Composition information of impurities and stabilizers

Chemical Identity	CAS number	Content in percent (%)*
N-[3-(trimethoxysilyl)propyl]ethylenediamine	1760-24-3	<3%
methanol	67-56-1	<=0.5%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

A specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

General information: Remove contaminated or saturated clothing immediately and dispose of safely.

Inhalation: If aerosol or mists are inhaled, take affected persons out into the fresh air.In case of persistent discomfort or other symptoms, consult a physician immediately.

Skin Contact:	Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Obtain medical attention immediately if symptoms occur. Wash clothing before reuse.
Eye contact:	In case of contact, immediately flush eyes with plenty of water, or if necessary, with eye rinsing solution. In case of persistent discomfort, consult an ophthalmologist.
Ingestion:	If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.
Personal Protection for First-aid Responders:	As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

Most important symptoms/effects, acute and delayed

Symptoms:	None known.
Hazards:	None known.

Indication of immediate medical attention and special treatment needed

Treatment:	If required, therapy of irritative effect. If substance has been swallowed: Early endoscopy in order to assess mucosa lesions in the oesophagus and stomach which may appear. If necessary, aspirate leftover substance. Allergic reactions cannot be excluded. Treatment of allergic reaction if necessary.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	foam Water spray. Carbon Dioxide. dry powder
Unsuitable extinguishing media:	High volume water jet
Specific hazards arising from the chemical:	Standard procedure for chemical fires.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	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 regulations.
Special protective equipment for fire-fighters:	As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Avoid contact with the skin and the eyes.

Methods and material for containment and cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Environmental Precautions: Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation): Provide good ventilation or extraction.

Safe handling advice: Assure sufficient ventilation. Application, processing: Provide good ventilation or extraction.Handle in accordance with good industrial hygiene and safety practice. 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. Avoid contact with skin and eyes. Do not breathe in vapours or aerosols.

Contact avoidance measures: No data available.

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 reuse.

Storage

Safe storage conditions: Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture.Normal measures for preventive fire protection.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
methanol	TWA	200 ppm	US. ACGIH Threshold Limit Values (03 2016)
	STEL	250 ppm	US. ACGIH Threshold Limit Values (03 2016)
	STEL	250 ppm 325 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	200 ppm 260 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	200 ppm 260 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)

Exposure guidelines

methanol	US. ACGIH Threshold Limit Values	Can be absorbed through the skin.

Appropriate Engineering Controls Provide good ventilation or extraction.

Individual protection measures, such as personal protective equipment

Eye/face protection: close-fitting protective goggles (e.g. closed goggles)

Skin Protection

Hand Protection:	Material: Butyl rubber. Break-through time: >= 480 min Material: Fluorinated rubber (Viton) Break-through time: >= 480 min Additional Information: Selection of protective gloves to meet the requirements of specific workplaces., Suitability for specific workplaces should be clarified with protective glove manufacturers., The information is based on our own tests, references from the literature and information from glove manufacturers, or derived by analogy with similar materials., Please observe that the daily duration of usage of a chemical protective glove is in practice far shorter due to the many influencing factors (e.g. temperature, mechanical strain on the glove material) than the permeation time determined acc. EN 374.Additional Information: The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use.
Skin and Body Protection:	suitable protective clothing - Use disposable clothing if appropriate. A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.
Respiratory Protection:	In case of dusts/vapours/aerosols being formed or if the limit values like TLV are exceeded: use respiratory equipment with suitable filter (filter type ABEK) or wear a self contained respiratory apparatus Use only respiratory protection equipment with CE-symbol including four digit test number. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used. Note time limit for wearing respiratory protective equipment. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.
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 reuse.

9. Physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	colourless to slightly yellow
Odor:	Slight, like fruit
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	Not applicable
Boiling Point:	295 °C
Flash Point:	> 95 °C (DIN EN ISO 2719 (Pensky-Martens, Closed Cup))
Evaporation Rate:	not determined
Flammability (solid, gas):	not flammable
Explosive limit - upper (%):	not determined

Explosive limit - lower (%):	not determined
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Density:	approx. 1.147 g/cm3 (20 °C)
Relative density:	No data available.
Solubility(ies)	
Solubility in Water:	immiscible
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	not determined
Self Ignition Temperature:	not spontaneously flammable
Decomposition Temperature:	not determined
Kinematic viscosity:	No data available.
Dynamic viscosity:	approx. 2,200 mPa.s (20 °C)

Other information

Explosive properties:	No data available.
Oxidizing properties:	No data available.
Minimum ignition temperature:	not determined
Peroxides:	Not applicable

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	No dangerous reactions known.
Conditions to avoid:	Hydrolyses on contact with water.
Incompatible Materials:	None known.
Hazardous Decomposition Products:	Methanol in case of hydrolysis. Alcohol formed by hydrolysis lowers the flash point of the product.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Components:

N-[3-(trimethoxysilyl)propyl]ethylenediamine	NOAEL (Rat, Oral): >= 500 mg/kg

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: Causes serious eye irritation.

Respiratory or Skin Sensitization
Product: May cause allergic skin reaction.

Carcinogenicity
Product: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

US. National Toxicology Program (NTP) Report on Carcinogens:

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Components:

N-[3-(trimethoxysilyl)propyl]ethylenediamine	Chromosomal aberration (OECD TG 474) intraperitoneal (i.p.) (Mouse): negative
methanol	Micronucleus test Intraperitoneal (Mouse, male and female): negative Chromosomal aberration (OECD 474) Intraperitoneal (Mouse, male and female): negative

Reproductive toxicity
Product: No data available.

Components:

N-[3-(trimethoxysilyl)propyl]ethylenediamine	Not classified
methanol	Not classified

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects: The toxicological data on this product have not been determined experimentally.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Components:

N-[3-(trimethoxysilyl)propyl]ethylenediamine	LC 50 (Brachydanio rerio (zebrafish), 96 h): 597 mg/l
methanol	LC 50 (Lepomis macrochirus (Bluegill sunfish), 96 h): 15,400 mg/l literature

Aquatic Invertebrates

Product: No data available.

Components:

N-[3-(trimethoxysilyl)propyl]ethylenediamine	EC 50 (Daphnia magna (Water flea), 48 h): 81 mg/l
methanol	EC 50 (Daphnia magna (Water flea), 96 h): 18,260 mg/l literature

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Components:

N-[3-	NOEC (Daphnia magna (Water flea), 21 d): > 1 mg/l

(trimethoxysilyl)propyl]eth
ylenediamine

Toxicity to Aquatic Plants

Product: No data available.

Components:

N-[3-(trimethoxysilyl)propyl]ethylenediamine	EC 50 (Desmodesmus subspicatus (green algae), 72 h): 126 mg/l
methanol	ErC50 (Selenastrum capricornutum (green algae), 96 h): approx. 22,000 mg/l literature

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: not determined

Mobility in soil: No data available.

Other adverse effects: An Expert Judgment stated that no classification is necessary based on present knowledge.

13. Disposal considerations

Disposal methods: Waste must be disposed of in accordance with federal, state, provincial and local regulations. Since empty containers retain product residue, follow MSDS and label warnings even after container is emptied.

Contaminated Packaging: Do not reuse empty containers and dispose of in accordance with the regulations 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. Other countries: observe the national regulations.

14. Transport information

Domestic regulation

49 CFR

Not regulated as a dangerous good

Remarks : Not dangerous according to transport regulations.

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
methanol	5000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Serious eye damage or eye irritation, Respiratory or Skin Sensitization

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity

None present or none present in regulated quantities.

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

WARNING: This product can expose you to chemicals including, methanol, which is [are] known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov.

US. New Jersey Worker and Community Right-to-Know Act

No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

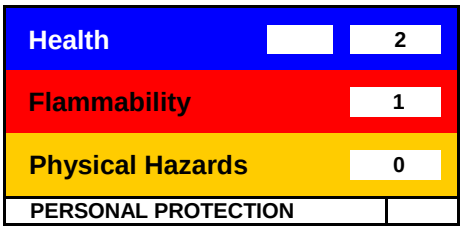
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

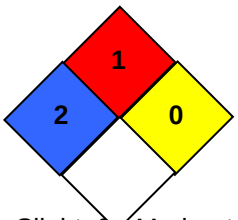
16.Other information, including date of preparation or last revision

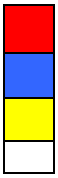
HMIS Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID





Flammability
Health
Reactivity
Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date:	05/09/2019
Version #:	1.0
Further Information:	No data available.
Revision Information:	Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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