

# SAFETY DATA SHEET

Classified in accordance with 29 CFR 1910.1200

## 1. Identification

**Product identifier:** VPS 7163

**Chemical name:**

1,3,5-tris[3-(trimethoxysilyl)propyl]-1,3,5-triazine-2,4,6(1H,3H,5H)-trione

**Other means of identification**

**CAS Number:** 26115-70-8

**Recommended restrictions**

**Recommended use:** For industrial use Additive Coupling agent

**Restrictions on use:** Not determined.

**Manufacturer/Importer/Distributor Information**

Company Name : Evonik Corporation  
2 Turner Place  
Piscataway, NJ 08854  
USA

Telephone : +1 732 981 5000

E-mail : product-regulatory-services@evonik.com

**Emergency telephone number:**

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)

Emergency 800 681 9531 (CHEMTREC MEXICO)

+1 703 527 3887 (CHEMTREC WORLD)

## 2. Hazard(s) identification

**Hazard Classification**

**Health Hazards**

Acute toxicity (Oral)

Category 4

**Label Elements**

**Hazard Symbol:**



**Signal Word:**

Warning

**Hazard Statement:**

Harmful if swallowed.

**Precautionary Statements**

- Prevention:** Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.
- Response:** IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
- Disposal:** Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

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

**3. Composition/information on ingredients**

**Chemical name:**  
 1,3,5-tris[3-(trimethoxysilyl)propyl]-1,3,5-triazine-2,4,6(1H,3H,5H)-trione  
**Substances**

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) <sup>*</sup>
1,3,5-tris[3-(trimethoxysilyl)propyl]-1,3,5-triazine-2,4,6(1H,3H,5H)-trione		26115-70-8	>=90 - <=100%

<sup>\*</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**Composition information of impurities and stabilizers**

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) <sup>*</sup>
methanol		67-56-1	>=0.1 - <=0.3%

<sup>\*</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

**4. First-aid measures**
**Description of first aid measures**

- General information:** Remove contaminated or saturated clothing immediately and follow safe disposal procedures.
- 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.

<b>Eye contact:</b>	Rinse thoroughly with plenty of water keeping eyelid open. In case of persistent discomfort: Consult an ophthalmologist.
<b>Ingestion:</b>	Have the mouth rinsed with water. After absorbing large amounts of substance / In case of discomfort: Supply with medical care.
<b>Personal Protection for First-aid Responders:</b>	No data available.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms:</b>	There is no specific therapy or antidote treatment known in cases of accidental ingestion of the substance. If a large amount of substance is ingested, treatment may include administration of activated charcoal or acceleration of the gastro-intestinal tract.
<b>Hazards:</b>	No data available.

**Indication of immediate medical attention and special treatment needed**

<b>Treatment:</b>	None known.
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**5. Fire-fighting measures****Suitable (and unsuitable) extinguishing media**

<b>Suitable extinguishing media:</b>	Water spray, foam, dry powder or carbon dioxide.
<b>Unsuitable extinguishing media:</b>	High volume water jet.
<b>Special hazards arising from the substance or mixture:</b>	Hazard-determining flue gases might develop in case of fire: Nitrogen Oxides

**Special protective equipment and precautions for firefighters**

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

**6. Accidental release measures**

<b>Personal precautions, protective equipment and emergency procedures:</b>	Use personal protective equipment. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes.
<b>Accidental release measures:</b>	No data available.

**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:**

Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems. 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:**

Use this product preferably in a closed system, or use process enclosures, local exhaust ventilation or other engineering controls to minimize airborne exposure.

**Local/Total ventilation:**

Application, processing: Provide good ventilation or extraction.

**Safe handling advice:**

Provide good ventilation. 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. Do not breathe in vapours or aerosols. Avoid contact with skin and eyes.

**Contact avoidance measures:**

No data available.

### Storage

**Safe storage conditions:**

Normal measures for preventive fire protection. Keep container tightly closed. Suitable materials are: Stainless steel. Material may crystallize or solidify upon exposure to low temperatures. Crystallized or solidified material can be utilized after melting at elevated temperatures without impacting handling or physical properties. Refer to technical data sheet for specific instructions.

**Safe packaging materials:**

No data available.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
1,3,5-tris[3-(trimethoxysilyl)propyl]-1,3,5-triazine-2,4,6(1H,3H,5H)-trione - Vapor.	ST ESL	1,000 µg/m <sup>3</sup>	TX ESL (06 2018)
	AN ESL	100 µg/m <sup>3</sup>	TX ESL (06 2018)
methanol	TWA	200 ppm	ACGIH (03 2016)

	STEL	250 ppm		ACGIH (03 2016)
	STEL	250 ppm	325 mg/m3	NIOSH (2010)
	REL	200 ppm	260 mg/m3	NIOSH (2010)
	PEL	200 ppm	260 mg/m3	OSHA Z1 (03 2016)

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

### Biological Limit Values

Chemical name	Parameters / Sampling Time	Exposure Limit Values	Source
methanol	methanol Sampling time: End of shift.	15 mg/l (Urine)	ACGIH BEI (03 2016)

### Appropriate Engineering Controls

Application, processing: Provide good ventilation or extraction. Use this product preferably in a closed system, or use process enclosures, local exhaust ventilation or other engineering controls to minimize airborne exposure.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection:

Safety glasses

#### Skin Protection

##### Hand Protection:

Material: Butyl rubber.  
 Break-through time:  $\geq$  480 min  
 Material: Fluorinated rubber (Viton)  
 Break-through time:  $\geq$  480 min  
 Additional Information: Selection of protective gloves to meet the requirements of specific workplaces., The suitability for a specific workplace should be discussed with the producers of the protective gloves., The information is based on our own tests, references from the literature and information from glove manufacturers, or derived by analogy with similar materials., Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature). 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:**

Safety showers and eye showers should be easily accessible. In order to determine further specifications applicable to the personal protection equipment, a hazard assessment according to the OSHA standards (29 CFR 1910.132) for personal protection equipment (PPE) is recommended before the product is used.

**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/vapor/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. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

**9. Physical and chemical properties****Information on basic physical and chemical properties****Appearance**

<b>Physical state:</b>	liquid
<b>Form:</b>	liquid
<b>Color:</b>	Colorless to light yellow
<b>Odor:</b>	Characteristic
<b>Odor Threshold:</b>	No data available.
<b>Freezing point:</b>	-4 °F/ -20 °C Method: DIN / ISO 3016
<b>Boiling Point:</b>	458.6 - 476.6 °F/237.0 - 247.0 °C at 35 hPa
<b>Flammability:</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Explosive limit - upper:</b>	No data available.
<b>Explosive limit - lower:</b>	No data available.
<b>Flash Point:</b>	> 203 °F/> 95 °C Method: DIN EN ISO 2719
<b>Auto-ignition temperature:</b>	662 °F/350 °C

	966 - 970 hPa Method: DIN EN 14522
<b>Decomposition Temperature:</b>	No data available.
<b>pH:</b>	No data available.
<b>Viscosity</b>	
<b>Dynamic viscosity:</b>	440 - 620 mPa.s at 68 °F/20 °C Method: DIN 53015
<b>Kinematic viscosity:</b>	No data available.
<b>Flow Time:</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	0.014 mg/l at 68 °F/20 °C Method: QSAR
	not miscible decomposition by hydrolysis
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	2.4 at 68 °F/20 °C Method: QSAR
<b>Vapor pressure:</b>	0.11 Pa at 68 °F/20 °C Method: EC Method A.4
<b>Relative density:</b>	No data available.
<b>Density:</b>	1.181 g/cm <sup>3</sup> at 68 °F/20 °C Method: DIN 51757
<b>Bulk density:</b>	No data available.
<b>Relative vapor density:</b>	No data available.
<b>Other information</b>	
<b>Explosive properties:</b>	Method: EC Method A.14 Not explosive
<b>Oxidizing properties:</b>	not oxidizing
<b>Peroxides:</b>	Not applicable

## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions:</b>	None known.
<b>Conditions to avoid:</b>	Keep away from moisture.
<b>Incompatible Materials:</b>	None known.
<b>Hazardous Decomposition Products:</b>	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:** Information on effects are given below.

**Skin Contact:** Information on effects are given below.

**Eye contact:** Information on effects are given below.

**Ingestion:** Information on effects are given below.

**Acute toxicity (list all possible routes of exposure)****Oral**

**Product:** LD 50, Rat, Female, Male, 1,713 mg/kg, OECD 401

**Dermal**

**Product:** LD 50, Rabbit, Female, Male, 19,200 mg/kg, OECD 402

**Inhalation**

**Product:** Not classified for acute toxicity based on available data.

**Repeated dose toxicity**

**Product:** NOAEL Rat, Female, Male, Oral, 90 day, daily, Approximate, 300 mg/kg

**Skin Corrosion/Irritation**

**Product:** Not irritating, OECD 404, (Rabbit)

**Serious Eye Damage/Eye Irritation**

**Product:** Not irritating, OECD 405, Rabbit

**Respiratory or Skin Sensitization**

**Product:** Buehler Test, OECD 406, Guinea Pig, Not a skin sensitizer.

**Carcinogenicity**

**Product:** No data available.

**Components:**

methanol Not classified

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogens present or none present in regulated quantities

**ACGIH: US.ACGIH Threshold Limit Values:**

No carcinogens present or none present in regulated quantities

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

No carcinogens present or none present in regulated quantities

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053), as amended:**

No carcinogens present or none present in regulated quantities

**Germ Cell Mutagenicity**

no evidence of mutagenic effects



**In vitro**

**Product:** gene mutation test, OECD 471: , negative  
gene mutation test, OECD 490: , negative  
Micronucleus test, OECD 487: , negative

**In vivo**

**Product:** No data available.  
**Components:**  
methanol Micronucleus test, OECD 474, Intraperitoneal, Mouse, Female, Male, negative  
Chromosomal aberration, Intraperitoneal, Mouse, Female, Male, negative

**Reproductive toxicity**

**Product:** no evidence of reproductiontoxic properties

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.  
**Components:**  
methanol Dermal Oral Inhalation - vapor, optic nerve, Central nervous system.,  
Category 1 Causes damage to organs.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Aspiration Hazard**

**Product:** No evidence of aspiration toxicity

**Information on health hazards****Other hazards**

**Product:** No data available.

**12. Ecological information****Ecotoxicity:****Acute hazards to the aquatic environment:****Fish**

**Product:** LC 50, species not listed, 96 h, > 100 mg/IQSAR

**Aquatic Invertebrates**

**Product:** EC 50, Daphnia magna, 48 h, > 100 mg/IOECD 202

**Toxicity to Aquatic Plants**

**Product:**

**Toxicity to microorganisms**

**Product:** EC 10, local activated sludge, 3 h, 218 mg/l, OECD 209

**Chronic hazards to the aquatic environment:****Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to microorganisms****Product:** EC 10, local activated sludge, 3 h, 218 mg/l, OECD 209**Persistence and Degradability****Biodegradation****Product:** 34 %, 28 d, OECD 301 B, Not readily degradable.**BOD/COD Ratio****Product:** No data available.**Bioaccumulative potential****Bioconcentration Factor (BCF)****Product:** Low bioaccumulation potential.**Partition Coefficient n-octanol / water (log Kow)****Product:** 2.4, 20 °C, QSAR**Mobility in soil:****Product:** Adsorption on the floor: low.**Results of PBT and vPvB assessment:****Product:** No data available.**Other adverse effects:****Other hazards****Product:** The data we have at our disposal do not necessitate identification concerning environmental hazard.**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) Proposed 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 1910.1001-1053), as amended**

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

None present or none present in regulated quantities.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Hazard categories**

Acute toxicity (any route of exposure)

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

None present or none present in regulated quantities.

**US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (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](http://www.P65Warnings.ca.gov).

**16. Other information, including date of preparation or last revision**
**HMIS Hazard ID**

<b>Health</b>	2
<b>Flammability</b>	1
<b>Physical Hazards</b>	0
<b>PERSONAL PROTECTION</b>	

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

**Version #:** 1.1  
**Generation date:** 01/25/2024  
**Date of first report version:** 04/26/2019

**Abbreviations and acronyms:**

ACGIH: US. ACGIH Threshold Limit Values, as amended  
 ACGIH BEI: US. ACGIH. BEIs. Biological Exposure Indices, as amended  
 NIOSH/GUIDE: US. NIOSH: Pocket Guide to Chemical Hazards, as amended  
 OSHA\_TRANS: US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended  
 TX ESL: US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended  
 ACGIH / STEL: Short Term Exposure Limit (STEL):  
 ACGIH / TWA: Time Weighted Average (TWA):  
 NIOSH/GUIDE / REL: Recommended exposure limit (REL):  
 NIOSH/GUIDE / STEL: Short Term Exposure Limit (STEL):  
 OSHA\_TRANS / PEL: Permissible exposure limit:  
 TX ESL / ST ESL: Short-Term ESL:  
 TX ESL / AN ESL: Annual ESL:

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IEC50 - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD -

Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**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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