

SAFETY DATA SHEET

Classified in accordance 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 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.
- 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:

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

Substances

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

* 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	CAS number	Content in percent (%)*
methanol	67-56-1	>=0.1 - <=0.3%

* 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 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.
- Eye contact:** Rinse thoroughly with plenty of water keeping eyelid open. In case of persistent discomfort: Consult an ophthalmologist.
- Ingestion:** Have the mouth rinsed with water. After absorbing large amounts of substance / In case of discomfort: Supply with medical care.

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: 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.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: None known.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray jet foam Carbon Dioxide. Dry powder

Unsuitable extinguishing media: High volume water jet

Specific hazards arising from the chemical: Hazard-determining flue gases might develop in case of fire: Nitrogen Oxides

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. Observe the rules usually applicable when handling chemicals. Avoid contact with skin and 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: 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 (e.g. Local and general ventilation):	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.
Safe handling advice:	Avoid contact with skin and eyes. 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.
Hygiene measures:	Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.
Storage	
Safe storage conditions:	Keep container tightly closed. Suitable materials are: Stainless steel. Normal measures for preventive fire protection.
Safe packaging materials:	No data available.

8. Exposure controls/personal protection

Control Parameters
Occupational Exposure Limits

Hazardous components without workplace control parameters

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., 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:

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:

Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

9. Physical and chemical properties
Appearance

Physical state:	liquid
Form:	liquid
Color:	Colourless to light yellow
Odor:	Characteristic
Odor Threshold:	not determined
pH:	not determined
Freezing point:	-20 °C (DIN / ISO 3016)
Boiling Point:	237.0 - 247.0 °C (35 hPa)
Flash Point:	> 95 °C (DIN EN ISO 2719 (Pensky-Martens, Closed Cup))
Evaporation Rate:	not determined
Flammability (solid, gas):	not determined

Explosive limit - upper (%):	not determined
Explosive limit - lower (%):	not determined
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Density:	1.181 g/cm ³ (20 °C) (DIN 51757)
Relative density:	No data available.
Solubility(ies)	
Solubility in Water:	not miscible decomposition by hydrolysis
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	not determined
Self Ignition Temperature:	not determined
Decomposition Temperature:	not determined
Kinematic viscosity:	No data available.
Dynamic viscosity:	440 - 580 mPa.s (20 °C, DIN 53 015)

Other information

Explosive properties: no explosion limits under standard conditions

Oxidizing properties: No data available.
Minimum ignition temperature: not determined

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: None known.

Conditions to avoid: Keep away from humidity.

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: If handled correctly, not a relevant route of exposure. Information on effects are given below.

Skin Contact: Relevant route of exposure. Information on effects are given below.

Eye contact: Relevant route of exposure. Information on effects are given below.

Ingestion: If handled correctly, not a relevant route of exposure. Information on effects are given below.

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: LD 50 (Rat): 1,717 mg/kg (literature value)

Dermal Product: No data available.

Inhalation Product: No data available.

Repeated dose toxicity Product: No data available.

Skin Corrosion/Irritation**Product:** No data available.**Serious Eye Damage/Eye Irritation****Product:** No data available.**Respiratory or Skin Sensitization****Product:** No data available.**Carcinogenicity****Product:** No data available.**Components:**

1,3,5-tris[3-

(trimethoxysilyl)propyl]-

1,3,5-triazine-

2,4,6(1H,3H,5H)-trione

methanol Not classified

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

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 1910.1001-1050):

No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity**In vitro****Product:** No data available.**In vivo****Product:** No data available.**Components:**

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:**

1,3,5-tris[3-

(trimethoxysilyl)propyl]-

1,3,5-triazine-

2,4,6(1H,3H,5H)-trione

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: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Components:

methanol LC 50 (Lepomis macrochirus (Bluegill sunfish), 96 h): 15,400 mg/l literature

Aquatic Invertebrates

Product: No data available.

Components:

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.

Toxicity to Aquatic Plants

Product: No data available.

Components:

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):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
methanol	5000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Acute toxicity (any route of exposure)

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

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
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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.

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

Health	2
Flammability	1
Physical Hazards	0
PERSONAL PROTECTION	

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

Issue Date: 04/26/2019

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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