

# SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

## 1. Identification

**Product identifier:** Protectosil® CHEM-TRETE® PB VOC  
**Chemical name:**  
CHEM-TRETE® PB VOC

**Other means of identification**  
None.

### Recommended restrictions

**Recommended use:** For industrial use  
**Restrictions on use:** Not known.

### 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

#### Physical Hazards

Flammable liquids Category 2

#### Health Hazards

Skin irritation Category 2

### Label Elements

#### Hazard Symbol:



**Signal Word:** Danger

**Hazard Statement:**  
 Highly flammable liquid and vapor.  
 Causes skin irritation.

**Precautionary Statements**

**Prevention:** Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/...] equipment. Use non-sparking tools. Take action to prevent static discharges. Wash thoroughly after handling. Wear protective gloves/eye protection/face protection. Keep away from heat/sparks/open flames. - No smoking.

**Response:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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

### 3. Composition/information on ingredients

**Chemical name:**  
 CHEM-TRETE® PB VOC

**Mixtures**

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) <sup>*</sup>
Ethanol		64-17-5	>=30 - <60%
Isobutyltriethoxysilane		17980-47-1	>=10 - <30%
Triethoxy(octyl)silane		2943-75-1	>=10 - <30%

<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 necessary first-aid measures**

**Inhalation:** If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

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<b>Skin Contact:</b>	Remove contaminated clothing/shoes. Flush skin with water. Follow by washing with soap and water. If symptoms develop or persist, obtain medical attention. Wash clothing before reuse.
<b>Eye contact:</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes or until all material has been removed. Obtain medical attention.
<b>Ingestion:</b>	Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.
<b>Personal Protection for First-aid Responders:</b>	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**

<b>Symptoms:</b>	None known.
<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>	Use water spray or fog, foam, dry chemical or CO <sub>2</sub> .
<b>Unsuitable extinguishing media:</b>	High volume water jet.

<b>Specific hazards arising from the chemical:</b>	Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.
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**Special protective equipment and precautions for firefighters**

<b>Special fire fighting procedures:</b>	Containers can build up pressure if exposed to heat (fire). Cool with water spray.
<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>	Remove all sources of ignition. Ventilate the area. Wear personal protective equipment; see section 8.
<b>Accidental release measures:</b>	Remove sources of ignition and ventilate area. Run off may create fire or explosion hazard in sewer. Assure sufficient ventilation.

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**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):** 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:** Ensure adequate ventilation. Wear personal protective equipment; see section 8. Keep away from heat, sparks, flames and other sources of ignition. Keep container tightly closed. Use only with adequate ventilation. Vapors may spread long distances and travel to areas away from the work site before igniting or flashing back to the vapor source.

**Contact avoidance measures:** No data available.

### Storage

**Safe storage conditions:** Keep in a cool place. Keep container tightly closed in a dry and well-ventilated place. Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container. This material may have a low electrical conductivity and therefore may accumulate dangerous levels of static electricity. An ignitable vapor-air mixture can form inside storage tanks.

The user must be sure to dissipate static charge by careful bonding and grounding of all equipment and personnel involved in fluid transfer with continuity checks to prove effectiveness. Additional precautions against fire and explosion are the use of inert gas to purge vapor space; dip-pipes while filling vessels, especially lined vessels; grounded tank level floats; reduced flow velocity; self-closing valves on transfer lines and flame arrestors in vent lines.

Additional guidance on fire and explosion protection may be found in various consensus standards, including NFPA 30, 69 and 77 and API 2003 as well as OSHA regulation 29CFR1910.106.

Follow all SDS/label precautions even after container is emptied because it may retain product residues.

**Safe packaging materials:** No data available.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Ethanol	STEL	1,000 ppm	US. ACGIH Threshold Limit Values, as amended (03 2016)
	REL	1,000 ppm      1,900	US. NIOSH: Pocket Guide to Chemical

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			mg/m3	Hazards, as amended (2010)
	PEL	1,000 ppm	1,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (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**

No biological exposure limits noted for the ingredient(s).

**Appropriate Engineering Controls** 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:** Use chemical splash goggles or face shield.

**Skin Protection**

**Hand Protection:** Additional Information: Use impermeable gloves.

**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:** 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:** No data available.

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

**Physical state:** liquid  
**Form:** liquid  
**Color:** Clear  
**Odor:** Strong odor.  
**Odor Threshold:** Not determined.  
**Freezing point:** No data available.  
**Boiling Point:** Not applicable  
**Flammability:** No data available.  
**Upper/lower limit on flammability or explosive limits**  
**Explosive limit - upper:** 15 %(V)  
**Explosive limit - lower:** 3.5 %(V)  
**Flash Point:** 54.00 °F/12.22 °C (Pensky-Martens Closed Cup)

<b>Self Ignition Temperature:</b>	Not determined.
<b>Decomposition Temperature:</b>	Not determined.
<b>pH:</b>	Not applicable
<b>Viscosity</b>	
<b>Dynamic viscosity:</b>	Not determined.
<b>Kinematic viscosity:</b>	No data available.
<b>Flow Time:</b>	Not applicable
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	not miscible decomposition by hydrolysis
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Vapor pressure:</b>	Not applicable
<b>Relative density:</b>	0.802
<b>Density:</b>	No data available.
<b>Bulk density:</b>	Not applicable
<b>Relative vapor density:</b>	No data available.
<b>Particle characteristics</b>	
<b>Particle Size Distribution:</b>	Not applicable
<b>Specific surface area:</b>	Not applicable
<b>Surface charge/Zeta potential:</b>	Not applicable
<b>Assessment:</b>	Not applicable
<b>Shape:</b>	Not applicable
<b>Crystallinity:</b>	Not applicable
<b>Surface treatment:</b>	Not applicable

**Other information**

<b>Explosive properties:</b>	Vapors can form explosive mixtures with air.
<b>Evaporation Rate:</b>	Not determined.

**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>	No data available.
<b>Conditions to avoid:</b>	Avoid high temperatures and sources of ignition.
<b>Incompatible Materials:</b>	Water. acids Oxidizing substances
<b>Hazardous Decomposition Products:</b>	Ethanol in case of hydrolysis.

**11. Toxicological information****Information on likely routes of exposure**

<b>Inhalation:</b>	No data available.
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<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	No data available.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)****Oral**

**Product:** Acute toxicity estimate: > 5,000 mg/kg (Calculation method)

**Dermal**

**Product:** No data available.

**Components:**

Ethanol	LD 50 (Rabbit): > 20,000 mg/kg literature
Isobutyltriethoxysilane	LD 50 (Rat): > 2,000 mg/kg Based on available data, the classification criteria are not met.
Triethoxy(octyl)silane	LD 50 (Rabbit): 6,730 mg/kg

**Inhalation**

**Product:** No data available.

**Components:**

Ethanol	LC 50 (Rabbit): 117 - 125 mg/l Vapour LC 50 (Acute toxicity estimate): > 10 mg/l Dusts, mists and fumes
Isobutyltriethoxysilane	LC 50 (Rat): 5.88 mg/l Dusts, mists and fumes Not applicable, Vapour
Triethoxy(octyl)silane	maximum concentration in the test: no animals died., Vapour Not applicable, Dusts, mists and fumes

**Repeated dose toxicity**

**Product:** No data available.

**Components:**

Isobutyltriethoxysilane	NOAEL (Rat, Oral): > 1,000 mg/kg
Triethoxy(octyl)silane	NOAEL (Rat, Oral): 300 mg/kg NOAEC (Rat, Inhalation, 5 days/weeks, 6 hours/day): 3000 mg/m <sup>3</sup> tested substance: Structurally similar substance

**Skin Corrosion/Irritation**

**Product:** No data available.

**Components:**

Ethanol	OECD 404 (Rabbit): Not irritating
Isobutyltriethoxysilane	OECD 404 (Rabbit): Irritating.
Triethoxy(octyl)silane	OECD 404 (Rabbit): Irritating.

**Serious Eye Damage/Eye Irritation**

**Product:** No data available.

**Components:**

Ethanol	Not irritating OECD 405 Rabbit: literature
Isobutyltriethoxysilane	Not irritating OECD 405 Rabbit:
Triethoxy(octyl)silane	Not irritating OECD 405 Rabbit:

**Respiratory or Skin Sensitization**

**Product:** No data available.

**Components:**

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Ethanol	Local Lymph Node Assay (LLNA), OECD 429 (Mouse): Not a skin sensitizer. literature
Isobutyltriethoxysilane	Maximization Test, OECD 406 (Guinea Pig): Non sensitising
Triethoxy(octyl)silane	Maximization Test, OECD 406 (Guinea Pig): Not a skin sensitizer. tested substance: Structurally similar substance

**Carcinogenicity**

**Product:** Contains no carcinogenic substances as defined by NTP, IARC and/or OSHA.

**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), as amended:**

No carcinogens present or none present in regulated quantities

**Germ Cell Mutagenicity**
**In vitro**

**Product:** No data available.

**Components:**

Ethanol	Ames test (OECD 471): negative literature gene mutation test (OECD 476): negative literature
Isobutyltriethoxysilane	Ames test (OECD 471): negative Chromosomal aberration (OECD 473): negative Chromosomal aberration (OECD 476): negative
Triethoxy(octyl)silane	Ames test (OECD 471): negative Chromosomal aberration (OECD 473): negative gene mutation test (OECD 476): negative

**In vivo**

**Product:** No data available.

**Components:**

Isobutyltriethoxysilane	Chromosomal aberration (OECD 474) Oral (Mouse, male and female): negative
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**Reproductive toxicity**

**Product:** No data available.

**Components:**

Isobutyltriethoxysilane	Animal testing did not show any effects on fertility. no evidence of reproductiontoxic properties OralOral
Triethoxy(octyl)silane	

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Components:**

Isobutyltriethoxysilane	Based on available data, the classification criteria are not met. no evidence for hazardous properties
Triethoxy(octyl)silane	

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Components:**

Isobutyltriethoxysilane	Based on available data, the classification criteria are not met. no evidence for hazardous properties
Triethoxy(octyl)silane	

**Aspiration Hazard**

**Product:** No data available.

**Components:**

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Ethanol	Not classified
Isobutyltriethoxysilane	No evidence of aspiration toxicity
Triethoxy(octyl)silane	Not classified

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

**Product:** The toxicological properties of this product have not been fully investigated.;

<b>12. Ecological information</b>
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**Ecotoxicity:**
**Acute hazards to the aquatic environment:**
**Fish**

<b>Product:</b>	No data available.
<b>Components:</b>	
Isobutyltriethoxysilane	LC 50 (Oncorhynchus mykiss, 96 h): 85 mg/l (literature value)
Triethoxy(octyl)silane	LC 50 (Oncorhynchus mykiss, 96 h): > 0.055 mg/l

**Aquatic Invertebrates**

<b>Product:</b>	No data available.
<b>Components:</b>	
Isobutyltriethoxysilane	EC 50 (Daphnia magna, 48 h): > 49.1 mg/l
Triethoxy(octyl)silane	EC 50 (Daphnia magna, 48 h): > 0.049 mg/l

**Toxicity to Aquatic Plants**

<b>Product:</b>	No data available.
<b>Components:</b>	
Triethoxy(octyl)silane	EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): > 0.13 mg/l (OECD 201)

**Toxicity to microorganisms**

<b>Product:</b>	No data available.
<b>Components:</b>	
Triethoxy(octyl)silane	EC 50 (activated sludge, 3 h): > 1,000 mg/l (OECD 209)

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

<b>Product:</b>	No data available.
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**Aquatic Invertebrates**

<b>Product:</b>	No data available.
<b>Components:</b>	
Triethoxy(octyl)silane	EC 10 (Daphnia magna, 21 d): 0.189 mg/l

**Toxicity to Aquatic Plants**

<b>Product:</b>	No data available.
<b>Components:</b>	
Isobutyltriethoxysilane	NOEC (Desmodesmus subspicatus (green algae), 72 h): >= 36 mg/l (OECD 201)
Triethoxy(octyl)silane	NOEC (Algae (Pseudokirchneriella subcapitata), 72 h): 0.13 mg/l (OECD 201)

**Toxicity to microorganisms**

<b>Product:</b>	No data available.
<b>Components:</b>	

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Triethoxy(octyl)silane      NOEC (activated sludge, 3 h): 1,000 mg/l (OECD 209)

**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: No data available.**Mobility in soil:****Product** No data available.**Results of PBT and vPvB assessment:****Product** A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out.**Other adverse effects:****Other hazards****Product:** No ecotoxicological studies are available.**Additional Information:** No data available.**13. Disposal considerations****Disposal methods:** Waste must be disposed of in accordance with federal, provincial, state and local regulations. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH AN ELECTRIC OR GAS TORCH.**Contaminated Packaging:** Packaging material should be recycled or disposed of in accordance with federal, state and local regulations.**14. Transport information****Domestic regulation****49 CFR**

UN/ID/NA number : UN 1170

Proper shipping name : Ethanol

Class : 3

Packing group : II

Labels : 3

ERG Code : 127

Marine pollutant : no

**International Regulations****IATA-DGR**

UN/ID No. : UN 1170  
Proper shipping name : Ethanol  
Class : 3  
Packing group : II  
Labels : 3  
Packing instruction (cargo aircraft) : 364  
Packing instruction (passenger aircraft) : 353  
Remarks : ERG-Code 3L, Maximum Net Quantity per Package 60 L

**IMDG-Code**

UN number or ID number : UN 1170  
Proper shipping name : ETHANOL  
  
Class : 3  
Packing group : II  
Labels : 3  
EmS Code : F-E, S-D  
Marine pollutant : no

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

Not applicable for product as supplied.

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**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), 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**

Flammable (gases, aerosols, liquids, or solids), Skin Corrosion or Irritation

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

Product name: Protectosil® CHEM-TRETE® PB VOC

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required**

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**

No ingredient requiring a warning under CA Prop 65.

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

Ethanol

**US. Massachusetts RTK - Substance List**
Chemical Identity

Ethanol

**US. Pennsylvania RTK - Hazardous Substances**

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

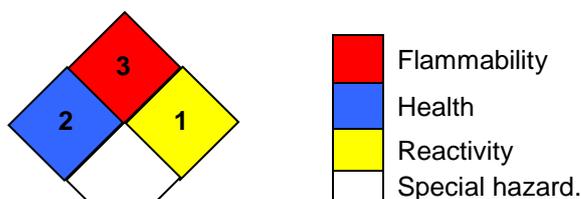
**US. Rhode Island RTK**
Chemical Identity

Ethanol

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

<b>Health</b>	2
<b>Flammability</b>	3
<b>Physical Hazards</b>	1
<b>PERSONAL PROTECTION</b>	

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

**NFPA Hazard ID**


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

**Issue Date:** 02/12/2021

**Version #:** 1.2

**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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