1. Identification

1.1. Product identifier

Trade name	Protectosil® CHEM-TRETE® 40 VOC
Chemical Name	CHEM-TRETE® BSM 40 VOC

1.2. Recommended use of the chemical and restrictions on use

Relevant applications identified	For industrial use
Function	Waterproofing agent

1.3. Details of the supplier of the safety data sheet

Company	Evonik Corporation USA 299 Jefferson Road Parsippany,NJ 07054-0677 USA
Telephone	973-929-8000
Telefax	973-929-8040
Email address	Product-Regulatory-Services@Evonik.com

1.4. 24 HOUR EMERGENCY TELEPHONE NUMBERS:

CHEMTREC - US & CANADA:	800-424-9300
CHEMTREC MEXICO:	01-800-681-9531
CHEMTREC INTERNATIONAL:	+1 703-527-3887 **(collect calls accepted)**
Product Regulatory Services :	973-929-8060

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation 29CFR 1910.1200

Flammable liquids	Category 2	H225
Skin irritation	Category 2	H315

2.2. Label elements

Statutory basis: Classification according to Regulation 29CFR 1910.1200

Symbol(s):

Signal word	Danger
Hazard statement	H225 - Highly flammable liquid and vapour. H315 - Causes skin irritation.
Precautionary statement: Prevention	P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P233 - Keep container tightly closed. P240 - Ground/bond container and receiving equipment. P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P264 - Wash skin thoroughly after handling. P280 - Wear protective gloves/ eye protection/ face protection.
Precautionary statement: Reaction	P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P332 + P313 - If skin irritation occurs: Get medical advice/ attention. P362 - Take off contaminated clothing and wash before reuse. P370 + P378 - In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
Precautionary statement: Storage	P403 + P235 - Store in a well-ventilated place. Keep cool.
Precautionary statement: Disposal	P501 - Dispose of contents/ container to an approved waste disposal plant.

2.3. Other hazards

None known.

3. Composition/information on ingredients

• **Triethoxyisobutylsilane**	>= 30% - < 60%	
CAS-No. 17980-47-1		
Flammable liquids		Category 4
Skin irritation		Category 2
• **Ethanol; ethyl alcohol**	>= 30% - < 60%	
CAS-No. 64-17-5		
Flammable liquids		Category 2

4. First aid measures

4.1. Description of 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.

Skin contact

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Obtain medical attention. Wash clothing before reuse. Destroy or thoroughly clean contaminated shoes before reuse.

Eye contact

In case of contact, immediately flush eyes with plenty of water. Obtain medical attention if irritation develops.

Ingestion
If swallowed, get medical attention immediately. Only induce vomiting if directed by a physician. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms
None known

4.3. Indication of any immediate medical attention and special treatment needed
None known.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Use water spray or fog, foam, dry chemical or CO2.
Unsuitable extinguishing media: High volume water jet.

5.2. Special hazards arising from the substance or mixture
Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

5.3. Advice for firefighters
As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.
Containers can build up pressure if exposed to heat (fire). Cool with water spray.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Remove all sources of ignition. Ventilate the area. Wear personal protective equipment; see section 8.

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

6.3. 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).

Additional advice
Remove sources of ignition and ventilate area.
Run off may create fire or explosion hazard in sewer.
Assure sufficient ventilation.

7. Handling and storage

7.1. Precautions for safe handling
Keep away from heat. Keep away from sparks, flames and other sources of ignition. Avoid breathing vapor or mist. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Follow all MSDS/Label precautions even after the container is emptied because it may retain product residue. Vapors may spread long distances and travel to areas away from the work site before igniting or flashing back to the vapor source.
Wear personal protective equipment; see section 8.

7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion

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 MSDS/label precautions even after container is emptied because it may retain product residues.

Storage

Keep tightly closed in a dry, cool and well-ventilated place.

Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container.

8. Exposure controls/personal protection

8.1. Control parameters

• **Ethanol; ethyl alcohol**		
CAS-No.	64-17-5	
Control parameters	1000 ppm 1900 mg/m3	Permissible exposure limit:(OSHA Z1)
Control parameters	1000 ppm 1900 mg/m3	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):(US CA OEL)
Control parameters	1000 ppm	Short Term Exposure Limit (STEL):(ACGIH)
Control parameters	1000 ppm 1900 mg/m3	Time Weighted Average (TWA):(TN OEL)

8.2. Exposure controls

Engineering measures

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

Personal protective equipment

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.

Hand protection

Use impermeable gloves.

Eye protection

Use chemical splash goggles or face shield.

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.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

physical state	liquid	
Colour	clear	
Form	liquid	
Odour	strong odor	
Odour Threshold	no data available	
pH	not determined	
Melting point/range	no data available	
Boiling point/range	78 °C	(760 hPa)
Flash point	12.78 °C Method:	Pensky-Martens C.C.
Evaporation rate	no data available	
Flammability (solid, gas)	No data available	
Lower explosion limit	not determined	
Upper explosion limit	not determined	
Vapour pressure	74 hPa	(22 °C)
Relative density	0.8	
Density	no data available	
Water solubility	not miscible decomposition by hydrolysis	
Partition coefficient: n-octanol/water	no data available	
Autoignition temperature	no data available	
Viscosity, dynamic	no data available	
Viscosity, kinematic	no data available	

9.2. Other information

Explosiveness	Vapors can form explosive mixtures with air.	
	% VOC (gm/l)	600

10. Stability and reactivity

10.1. Reactivity
No dangerous reaction known under conditions of normal use.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions: No dangerous reactions known.

10.4. Conditions to avoid
Avoid high temperatures and sources of ignition.

10.5. Incompatible materials
Water, Acids, oxidizing substances

10.6. Hazardous decomposition products
Silicone polymers.

Stable under normal conditions.
Product will not undergo hazardous polymerization.

11. Toxicological information

11.1. Information on toxicological effects

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

Toxicological information on components
Isobutyltriethoxysilane

Acute oral toxicity	LD50 Rat: > 5000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	LC50 Rat: 5.88 mg/l / 4 h / dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	LD50 Rat: > 2000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity
Skin irritation	Rabbit Skin irritation Method: OECD Test Guideline 404 Rapid evapouration of the liquid may cause frostbite.
Eye irritation	Rabbit No eye irritation Method: OECD Test Guideline 405

Sensitization	maximization test Guinea pig: Does not cause skin sensitisation. Method: OECD Test Guideline 406
Repeated dose toxicity	Oral Rat / 28-day NOAEL: > 1000 mg/kg Method: OECD Test Guideline 407
Assessment of STOT single exposure	Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.
Assessment of STOT repeat exposure	Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Risk of aspiration toxicity	No aspiration toxicity classification
Gentoxicity in vitro	Ames test Salmonella typhimurium negative Method: OECD TG 471 chromosomal aberration Chinese hamster (V 79 -cells) negative Method: OECD TG 473 chromosomal aberration Chinese hamster (CHO K1 -cells) negative Method: OECD TG 476
Gentoxicity in vivo	chromosomal aberration Mouse Oral negative Method: OECD TG 474
Carcinogenicity	No evidence that cancer may be caused.
Toxicity to reproduction	Animal model trials have produced no evidence of fertility damage.

Ethanol; ethyl alcohol

Acute oral toxicity	LD50 Rat: 6200 mg/kg Test substance: Ethanol (IUCLID)
Acute inhalation toxicity	LC50 Rat: 95.6 mg/l / 4 h Test substance: Ethanol RTECS
Skin irritation	Rabbit Not irritating. Method: OECD Test Guideline 404 Test substance: Ethanol The liquid removes oil from the skin. Repeated skin contact can cause dry and fragile skin.
Sensitization	Magnusson & Kligman : not sensitizing Test substance: Ethanol

	(IUCLID)
Mutagenicity assessment	This product may cause mutagenic effects.

12. Ecological information

12.1. Toxicity
no data available

12.2. Persistence and degradability
Biodegradability: no data available

12.3. Bioaccumulative potential
Bioaccumulation: no data available

12.4. Mobility in soil
Mobility: no data available.

12.5. Other adverse effects
Further Information: No ecotoxicological studies are available.

13. Disposal considerations

13.1. Waste treatment methods

Product

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.

Uncleaned packaging
Packaging material should be recycled or disposed of in accordance with federal, state and local regulations.

14. Transport information

D.O.T. Road/Rail

14.1.	UN number:	UN 1170
14.2.	UN proper shipping name:	Ethanol solution
14.3.	Transport hazard class(es):	3
14.4.	Packing group:	II
14.5.	Environmental hazards (Marine pollutant):	--
14.6.	Special precautions for user:	No

Air transport ICAO-TI/IATA-DGR

14.1.	UN number:	UN 1170
14.2.	UN proper shipping name:	Ethanol solution
14.3.	Transport hazard class(es):	3
14.4.	Packing group:	II
14.5.	Environmental hazards:	--
14.6.	Special precautions for user:	Yes

IATA-C: ERG-Code 3L
Maximum Net Quantity per Package 60 L
IATA-P: ERG-Code 3L
Maximum Net Quantity per Package 5 L

Sea transport IMDG-Code/GGVSee (Germany)

14.1.	UN number:	UN 1170
14.2.	UN proper shipping name:	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
14.3.	Transport hazard class(es):	3
14.4.	Packing group:	II
14.5.	Environmental hazards (Marine pollutant):	--
14.6.	Special precautions for user:	No
	EmS:	F-E,S-D

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:
for transportapproval see regulatory information

15. Regulatory information

US Federal Regulations

OSHA

If listed below, chemical specific standards apply to the product or components:

- None listed

Clean Air Act Section (112)

If listed below, components present at or above the de minimus level are hazardous air pollutants:

- None listed

CERCLA Reportable Quantities

If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

- None listed

SARA Title III Section 311/312 Hazard Categories

The product meets the criteria only for the listed hazard classes:

- Acute Health Hazard
- Fire Hazard

SARA Title III Section 313 Reportable Substances

If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

- None listed

Toxic Substances Control Act (TSCA)

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None listed

State Regulations

The Listing requirements of the Right to Know (RTK) legislation varies by state. All information for NJ, PA, MA and other states can be derived from the listing of hazardous and non-hazardous components in section 2 and 15 of this MSDS.

California Proposition 65

A warning under the California Drinking Water Act is required only if listed below:

- None listed

An employer using HMIS/NFPA labeling must through training ensure that its employees are fully aware of the hazards of the chemicals used.

HMIS Ratings

Health :	2
Flammability :	3
Physical Hazard :	1

NFPA Ratings

Health :	2
Flammability :	3
Reactivity :	1

16. Other information

Further information

Revision date 04/21/2015

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Legend

ACC	American Chemistry Council
ACGIH	American Conference of Governmental Industrial Hygenists
ACS	Advisory Committee on Sustainability
ADI	Acceptable Daily Intake
ASTM	American Society for Testing and Materials
ATP	Adaptation to Technical Progress
BCF	Bioconcentration factor
BOD	Biochemical oxygen demand
c.c.	closed cup
CAO	Cargo Aircraft Only
Carc	Carcinogen
CAS	Chemical Abstract Services
CDN	Canada
CEPA	Canadian Environmental Protection Act
CERCLA	Comprehensive Environmental Response – Compensation and Liability Act
CFR	Code of Federal Regulations
CMR	carcinogenic-mutagenic-toxic for reproduction
COD	Chemical oxygen demand
DIN	German Institute for Standardization
DMEL	Derived minimum effect level
DNEL	Derived no effect level
DOT	Department of Transportation
EC50	half maximal effective concentration
EPA	Environmental Protection Agency
ErC50	Reduction of Growth Rate
ERG	Emergency Response Guide Book
FDA	Food and Drug Administration
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
GLP	Good Laboratory Practice
GMO	Genetic Modified Organism
HCS	Hazard Communication Standard
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO-TI	International Civil Aviation Organization- Technical Instructions
ICCA	International Council of Chemical Association
ID	Identification number
IMDG	International Maritime Dangerous Goods
IUPAC	International Union of Pure and Applied Chemistry
ISO	International Organization For Standardization
LC50	50 % Lethal Concentration
LD50	50 % Lethal Dose
L(E)C50	LC50 or EC50
LOAEL	Lowest observed adverse effect level
LOEL	Lowest observed effect level
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Protection Association
NOAEL	No observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
o. c.	open cup
OECD	Organisation for Economic Cooperation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PBT	Persistent, bioaccumulative, toxic
PEC	Predicted effect concentration
PNEC	Predicted no effect concentration
RQ	Reportable Quantity
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
UN	United Nations
vPvB	very persistent, very bioaccumulative

voc	volatile organic compounds
WHMIS	Workplace Hazardous Materials Information System
WHO	World Health Organization