1. Identification

1.1. Product identifier

Trade name: Protectosil® CHEM-TRETE® PB 100
Chemical Name: Protectosil® CHEM-TRETE® PB 100

1.2. Recommended use of the chemical and restrictions on use

Relevant applications identified: FOR PROFESSIONAL USE ONLY.

1.3. Details of the supplier of the safety data sheet

Company: Evonik Corporation
299 Jefferson Road
Parsippany, NJ 07054-0677
USA

Telephone: 973-929-8000
Telefax: 973-929-8040
Email address: Product-Regulatory-Services@evonik.com

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation 29CFR 1910.1200

- Flammable liquids: Category 3 H226
- Skin irritation: Category 2 H315

2.2. Label elements

Classification according to Regulation 29CFR 1910.1200
SAFETY DATA SHEET
Protectosil® CHEM-TRETE® PB 100

Signal word
Warning

Hazard statement
H226 - Flammable liquid and vapor.
H315 - Causes skin irritation.

Precautionary statement:
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.
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.
P363 - Wash contaminated clothing before reuse.
P370 + P378 - In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
P403 + P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/ container to an approved waste disposal plant.

2.3. Other hazards
None known.

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Trade Secret</th>
<th>Flammable liquids</th>
<th>Skin irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• NJTSR No.56705700001-6651P</td>
<td>&gt;= 60% - &lt;= 100%</td>
<td>Category 4</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Trade Secret</th>
<th>Skin irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• NJTSR No.56705700001-5361P</td>
<td>&gt;= 10% - &lt;30%</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Other information
The specific chemical identity and exact concentration has been withheld as a trade secret.

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 for at least 15 minutes or until all material has been removed. Obtain medical attention.

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
Combustible liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint. Burning will produce hazardous compounds including oxides of: carbon.

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

6. Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation. Use personal protective equipment.

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

6.3. Methods and material for containment and cleaning up
Absorb spill with inert material, then place in a chemical waste container. After removal, flush contaminated area with water and collect for disposal. Clean up spills immediately. Remove sources of ignition and ventilate area. Use a respirator and other protective equipment as outlined in Section 8. Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

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 contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. The need for grounding and bonding of containers in accordance with OSHA 29 CFR 1910.106 and NFPA 77 should be assessed for all product transfers. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling.
7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion
Take precautionary measures against static charges and keep away from sources of ignition.

Storage
Keep tightly closed in a dry, cool and well-ventilated place.
Keep away from heat. Keep away from sparks, flame and other sources of ignition.
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

Other information
Contains no substances with occupational exposure limit values.

8.2. Exposure controls

Engineering measures
Provide good ventilation or extraction.

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.

Hygiene measures
Handle in accordance with good hygiene and safety practices.
When using, do not eat, drink or smoke. Wash face and/ or hands before break and end of work.
Avoid contact with skin.
If there is the possibility of skin/eye contact, the indicated hand/eye/ body protection should be used.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state liquid
Color clear
Form liquid
Odor Characteristic odor.
Odor Threshold no data available
pH not determined
Melting point/range: no data available
Boiling point/range: not determined
Flash point: 55 °C
Evaporation rate: no data available
Flammability (solid, gas): No data available
Lower explosion limit: not determined
Upper explosion limit: not determined
Vapor pressure: 74 hPa (22 °C)
Vapor density: No data available
Relative vapor density: no data available
Relative density: no data available
Water solubility: no data available
Partition coefficient: n-octanol/water: no data available
Autoignition temperature: no data available
Thermal decomposition: 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.

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
Keep away from heat and sources of ignition.

10.5. Incompatible materials
Water, oxidizing substances
10.6. **Hazardous decomposition products**
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.

Further information
No investigations were carried out with the preparation itself.

**Toxicological information on components**

**NJTSR NO. 56705700001-6651P**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>LD50 Rat: &gt; 5000 mg/kg</td>
<td>OECD Test Guideline 401</td>
</tr>
<tr>
<td>Acute inhalation toxicity</td>
<td>LC50 Rat: 5.88 mg/l / 4 h / Aerosol</td>
<td>OECD Test Guideline 403</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>LD50 Rat: &gt; 2000 mg/kg</td>
<td>OECD Test Guideline 402</td>
</tr>
<tr>
<td>Skin irritation</td>
<td>Rabbit irritating</td>
<td>OECD Test Guideline 404</td>
</tr>
<tr>
<td>Eye irritation</td>
<td>Rabbit</td>
<td>OECD Test Guideline 405</td>
</tr>
<tr>
<td>Sensitization</td>
<td>Maximization test Guinea pig: Does not cause skin sensitization.</td>
<td>OECD Test Guideline 406</td>
</tr>
<tr>
<td>Repeated dose toxicity</td>
<td>Oral Rat / 28-day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NOAEL: &gt; 1000 mg/kg</td>
<td>OECD Test Guideline 407</td>
</tr>
<tr>
<td>Gentoxicity in vitro</td>
<td>Ames test Salmonella typhimurium negative</td>
<td>OECD TG 471</td>
</tr>
<tr>
<td>Gentoxicity in vitro</td>
<td>Chromosome aberration test in vitro Chinese hamster (V 79 -cells) negative</td>
<td>OECD TG 473</td>
</tr>
<tr>
<td>Gentoxicity in vivo</td>
<td>chromosomal aberration Mouse Oral negative</td>
<td>OECD TG 474</td>
</tr>
</tbody>
</table>
Toxicity to reproduction
Animal model trials have produced no evidence of fertility damage.

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Acute oral toxicity
LD50 Rat: > 5110 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity
LC0 Rat: 22 ppm / 4 h / vapor
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity maximum concentration in the test: no animals died.

Acute dermal toxicity
LD50 Rabbit: 6730 mg/kg
Method: OECD Test Guideline 402

Skin irritation
Rabbit
Skin irritation
Method: OECD Test Guideline 404

Eye irritation
Rabbit
No eye irritation
Method: OECD Test Guideline 405

Sensitization
maximization test Guinea pig: Does not cause skin sensitization.
Method: OECD Test Guideline 406
Test substance: Structurally similar substance

Repeated dose toxicity
Oral Rat / 28-day
NOAEL: 300 mg/kg
Method: OECD TG 422

Genotoxicity in vitro
Ames test Salmonella typhimurium
negative
Method: OECD TG 471

chromosomal aberration Chinese hamster (CHO K1 -cells)
negative
Method: OECD TG 473

Genetic mutation in mammal cells TK +/- mouse lymphoma cell (L5178Y)
negative
Method: OECD TG 476

Carcinogenicity
No data available

Toxicity to reproduction
Screening for reproductive/developmental toxicity Oral Rat
Number of exposures: daily
NOAEL (No Observed Adverse Effect Level) of parents:
Method: OECD TG 422

Screening for reproductive/developmental toxicity Oral Rat
Number of exposures: daily
NOAEL F1:
300 mg/kg
12. Ecological information

12.1. Toxicity

*no data available*

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodegradability</td>
<td>no data available</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulation</td>
<td>no data available</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>no data available</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN 1993</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>FLAMMABLE LIQUID, N.O.S. (alkoxysilane)</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazards (Marine pollutant):</td>
<td>--</td>
</tr>
<tr>
<td>Special precautions for user:</td>
<td>Yes</td>
</tr>
<tr>
<td>ROAD (CFR): In the U.S. this material may be classified as combustible liquid. Combustible liquids are not regulated in packages 450 liters or less. This applies for shipments by road and rail only.</td>
<td></td>
</tr>
</tbody>
</table>
RAIL: In the U.S. this material may be classified as combustible liquid. Combustible liquids are not regulated in packages 450 liters or less. This applies for shipments by road and rail only.

Air transport ICAO-TI/IATA-DGR
14.1. UN number: UN 1993
14.2. UN proper shipping name: Flammable liquid, n.o.s.(alkoxysilane)
14.3. Transport hazard class(es): 3
14.4. Packing group: III
14.5. Environmental hazards: --
14.6. Special precautions for user: Yes
   IATA-C: ERG-Code 3L
   Maximum Net Quantity per Package 220 L
   IATA-P: ERG-Code 3L
   Maximum Net Quantity per Package 60 L

Sea transport IMDG-Code/GGVSee (Germany)
14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (alkoxysilane)
14.3. Transport hazard class(es): 3
14.4. Packing group: III
14.5. Environmental hazards (Marine pollutant): --
14.6. Special precautions for user: No
   EmS: F-E, S-E
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: for transport approval 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
SAFETY DATA SHEET
Protectosil® CHEM-TRETE® PB 100

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- 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: 2
Physical Hazard: 1

NFPA Ratings

Health: 2
Flammability: 2
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.
This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.
Legend

ACC: American Chemistry Council
ACGIH: American Conference of Governmental Industrial Hygienists
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
C EPA: 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
DM EL: 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)C 50: LC50 or EC50
LOA EL: 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: Organization 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
<table>
<thead>
<tr>
<th>Material no.</th>
<th>Specification</th>
<th>Version</th>
<th>Revision date</th>
<th>Print date</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>151513</td>
<td>2.0 / US</td>
<td>04/21/2015</td>
<td>09/16/2015</td>
<td>13 10 / 13</td>
</tr>
</tbody>
</table>

VOC
Volatile organic compounds

WHMIS
Workplace Hazardous Materials Information System

WHO
World Health Organization