

MATERIAL SAFETY DATA SHEET

Protectosil® CHEM-TRETE® BSM 400

degussa.

Material no.		Version	1.5 / US
Specification	151329	Revision date	03/15/2006
Order Number		Print Date	03/16/2006
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : Protectosil® CHEM-TRETE® BSM 400
Function : FOR PROFESSIONAL USE ONLY.

Company : Degussa Corporation
379 Interpace Parkway
Parsippany, NJ 07054
USA

Telephone : 973-541-8000

Telefax : 973-541-8040

US: CHEMTREC EMERGENCY NUMBER : 800-424-9300

CANADA: CANUTEC EMERGENCY NUMBER : 613-996-6666

Product Regulatory Services : 973-541-8060

2. COMPOSITION/INFORMATION ON INGREDIENTS

Information on ingredients / Hazardous components

NJTSR No.56705700001-6651P
CAS-No. Trade Secret Percent (Wt./ Wt.) 100 %

Other information

This material is classified as hazardous under OSHA regulations.

3. HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***

Form-liquid *Color-colorless* *Odor-characteristic*

Combustible liquid and vapor.
May cause skin irritation.

POTENTIAL HEALTH EFFECTS

Eye contact
Non-irritating.

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Skin Contact

Irritating.

Inhalation

No hazard expected in normal use.

Ingestion

No hazard expected in normal use.

Chronic Health Hazard

This product can hydrolyze to form a material posing additional health effects:
Ethanol: ACGIH TLV: TWA 1000 ppm; OSHA PEL: TWA 1000 ppm. Liquid and high vapor concentrations cause eye irritation. Contact of liquid with skin causes drying, cracking, and irritation. Inhalation causes irritation of the respiratory tract. Repeated or prolonged exposure to high vapor concentrations may cause drowsiness. Excessive or repeated ingestion may cause central nervous system effects, liver effects and reproductive effects. However, ingestion is not an expected route of exposure. Ethanol has a low potential to cause allergic skin reactions; however, undocumented cases of human skin sensitization have been reported. Undocumented reports suggest that this product may form a siloxane polymer on the eyes, lungs, or other mucous membranes. In the event of contact, get medical attention.

4. 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

Flush skin with plenty of water. Remove contaminated clothing. Obtain medical attention if irritation develops or persists.

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.

5. FIRE-FIGHTING MEASURES

Flash point 63 °C , 145 °F
Method: DIN 51 755

Autoignition temperature not determined

Suitable extinguishing media

Use water spray or fog, foam, dry chemical or CO₂.

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Specific hazards during fire fighting

Combustible liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

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.

Further information

Containers can build up pressure if exposed to heat (fire). Cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Ensure adequate ventilation. Use personal protective equipment.

Environmental precautions

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

Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Fill into marked, sealable containers.

7. HANDLING AND STORAGE

Handling

Safe handling advice

Remove contaminated clothing and wash before reuse.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion

Take precautionary measures against static charges and keep away from sources of ignition.

Storage

Requirements for storage areas and containers

Keep away from heat. Keep away from sparks, flame and other sources of ignition.
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

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.

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Hand protection

Use impermeable gloves.

Eye protection

Wear safety glasses with side shields.

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.

Do not inhale vapors / aerosol. Remove contaminated or saturated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form	liquid
Color	colorless
Odor	characteristic

Safety data

pH	not determined
Melting point/range	-65 °C
Boiling point/range	ca. 186 °C (1013 hPa) Method: DIN 51 751
Flash point	63 °C Method: DIN 51 755
Autoignition temperature:	not determined
Vapor pressure	0.68 hPa (25 °C)
Relative vapor density	Heavier than air
Solvents and Volatiles Data	% VOC (gm/l) 383
Evaporation rate	Slower than butyl acetate

10. STABILITY AND REACTIVITY

Conditions to avoid	Keep away from heat and sources of ignition.
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Materials to avoid	Water, oxidizing substances
Hazardous decomposition products	Ethanol in case of hydrolysis
Further information	Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Product Acute oral toxicity	LD50 rat: > 5000 mg/kg Method: literature
Product Acute inhalation toxicity	LC0 Rat: 5.88 mg/l / 4 h Method: literature
Product Acute dermal toxicity	LD50 rat: > 2000 mg/kg Method: literature
Product Skin irritation	Irritating to skin. Method: literature
Product Eye irritation	Not irritating. Method: literature
Product General Toxicity Information	Own study

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

Biodegradability	Readily biodegradable. 75 % Method: OECD 301 D (literature value)
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Ecotoxicity effects

Toxicity to fish	LC50 Oncorhynchus mykiss: 85 mg/l / 96 h Method: EC 84/449 (literature value)
Toxicity to daphnia	EC50 Daphnia magna: > 49.10 mg/l / 48 h Method: EC 84/449
Toxicity to algae	NOEC scenedesmus subspicatus: >= 36.00 mg/l / 72 h Method: EC 88/302
Toxicity in terrestrial plants	EC50 Trifolium ornithopadioides: > 100.00 mg/kg / 336 h Method: OECD 208

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EC50 Lepidium sativum: > 100.00 mg/kg / 336 h
Method: OECD 208

EC50 Triticum aestivum: > 100.00 mg/kg / 336 h
Method: OECD 208

Toxicity in other terrestrial non-mammals LC50 Eisenia foetida foetida: > 1000.00 mg/kg / 14 d
Method: EC 88/302

General Ecological Information The data we have at our disposal do not necessitate identification concerning environmental hazard.

13. DISPOSAL CONSIDERATIONS**WASTE DISPOSAL**

Advice on disposal

Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.

14. TRANSPORT INFORMATION**D.O.T. Road/Rail**

Class	Combustible Liquid
UN-No	1993
Packing group	III
Proper shipping name	Combustible liquid, n.o.s.
Technical Name	(alkoxysilane,)

Loading instructions/Remarks

IATA_C	Not hazardous freight in air traffic (ICAO-TI / IATA-DGR).
IATA_P	Not hazardous freight in air traffic (ICAO-TI / IATA-DGR).
IMDG	Not classified as hazardous sea cargo (IMDG code)
IMDG	FOR USA ONLY: In packagings exceeding 450 L, this product must be classified, placarded, marked and shipped as Combustible Liquid to the USA.
CFR_INWTR	Not regulated in packages 450 liter or less.
CFR_ROAD	Not regulated in packages 450 liter or less.
CFR_RAIL	Not regulated in packages 450 liter or less.

15. REGULATORY INFORMATION

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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

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International Chemical Inventory Status

Unless otherwise noted, this product is in compliance with the inventory listing of the countries shown below. For information on listing for countries not shown, contact Degussa Corporation Product Regulatory Department:

- | | |
|--------------------------|---------------------------|
| • Europe (EINECS/ELINCS) | Listed/registered |
| • USA (TSCA) | Listed/registered |
| • Canada (DSL) | Listed/registered |
| • Australia (AICS) | Listed/registered |
| • Japan (MITI) | Not listed/Not registered |
| • Korea (TCCL) | Listed/registered |
| • Philippines (PICCS) | Listed/registered |
| • China | Listed/registered |

16. OTHER INFORMATION

HMIS Ratings

Health :	2
Flammability :	2
Physical Hazard :	1

NFPA Ratings

Health :	2
Flammability :	2
Reactivity :	1

Further information

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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.