

SAFETY DATA SHEET**Protectosil® WS 670**

| | | | |
|---------------|--------|---------------|------------|
| Material no. | | Version | 3.1 / US |
| Specification | 168567 | Revision date | 03/21/2016 |
| Order Number | | Print Date | 08/03/2016 |
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| | |
|---------------------------------------|--|
| Signal word | Warning |
| Hazard statement | H315 - Causes skin irritation. H319 - Causes serious eye irritation. |
| Precautionary statement Prevention | P264 - Wash skin thoroughly after handling. P280 - Wear eye protection/ face protection. P280 - Wear protective gloves. |
| Precautionary statement Reaction | P302 + P352 - IF ON SKIN: Wash with plenty of water/ soap. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332 + P313 - If skin irritation occurs: Get medical advice/ attention. P337 + P313 - If eye irritation persists: Get medical advice/ attention. P362 - Take off contaminated clothing and wash before reuse. |

2.3. Other hazards

None known.

3. Composition/information on ingredients

| | | |
|-------------------------------------|------------------|------------|
| • Triethoxy(octyl)silane | >= 20% | |
| CAS-No. | 2943-75-1 | |
| Skin irritation | | Category 2 |
| • Isotridecanol, ethoxylated | < 2% | |
| CAS-No. | 69011-36-5 | |
| Serious eye damage | | Category 1 |
| Chronic aquatic toxicity | | Category 3 |

4. First aid measures**4.1. Description of first aid measures****General advice**

Remove contaminated or saturated clothing immediately and dispose of safely.

Inhalation

If aerosol or mists are inhaled, take affected persons out into the fresh air. Possible discomforts include severe irritation of mucus lining (nose, throat, eyes), cough, sneezing and flow of tears. In case of persistent discomfort, obtain medical attention immediately.

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

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not allow contaminated water to contact the unaffected eye or face during irrigation of an affected eye. Consult an ophthalmologist.

Ingestion

If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.

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Never administer anything by mouth to an individual who rapidly losing consciousness, unconscious or convulsing.

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

After absorbing large amount of substance, apply therapy for irritative effects. If substance has been swallowed, early endoscopy is recommended in order to assess mucosa lesions in the esophagus and stomach which may appear. If necessary, suck away leftover substance. Allergic reactions cannot be excluded. Apply treatment of allergic reaction if necessary.

4.3. Indication of any immediate medical attention and special treatment needed

If required, therapy of irritative effect.

If substance has been swallowed:

Early endoscopy in order to assess mucosa lesions in the oesophagus and stomach which may appear. If necessary, aspirate left over substance.

Allergic reactions cannot be excluded.

Treatment of allergic reaction if necessary.

5. Fire-fighting measures**5.1. Extinguishing media**

Suitable extinguishing media: foam, water spray, Carbon dioxide (CO₂), dry powder

Unsuitable extinguishing media: high volume water jet

5.2. Special hazards arising from the substance or mixture

Standard procedure for chemical fires.

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.

6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment.

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).

7. Handling and storage**7.1. Precautions for safe handling**

Handle and open container with care.

7.2. Conditions for safe storage, including any incompatibilities**Advice on protection against fire and explosion**

Normal measures for preventive fire protection.

Storage

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

Protect from frost.

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Always avoid temperatures of > 40°C.
Do not store together with: strong acids, bases.

Further information

Keep tightly sealed in original packing.
Protect from frost.

8. Exposure controls/personal protection**8.1. Control parameters****Other information**

No substance-specific limiting value being known.

8.2. Exposure controls**Engineering measures**

Provide adequate ventilation.

Personal protective equipment**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.

Hand protection

Glove material butyl-rubber

Material thickness 0.5 mm

Break through time > 480 min

Glove material for example, Fluorinated rubber (Viton)

Material thickness 0.4 mm

Break through time >= 480 min

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.

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.

Eye protection

Safety glasses

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.

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Hygiene measures

When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work.
Remove contaminated or saturated clothing.
Wash contaminated clothing before re-use.

Protective measures

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 the skin and the eyes.

9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

| | |
|--|---|
| physical state | liquid |
| Colour | milky-white |
| Form | liquid |
| Odour | almost odourless, slightly alcoholic |
| pH | 6.0 - 8.0 (20 °C) |
| Melting point/range | not determined |
| Boiling point/range | ca. 100 °C |
| Flash point | 95 °C Method: DIN EN ISO 2719 (Pensky-Martens, Closed Cup) |
| Evaporation rate | not determined |
| Lower explosion limit | not determined |
| Upper explosion limit | not determined |
| Vapour pressure | 23 hPa (20 °C) water |
| Density | 0.96 g/cm ³ (20 °C) Method: DIN 51757 |
| Water solubility | miscible with water |
| Partition coefficient: n-octanol/water | not determined |
| Autoignition temperature | not determined |
| Thermal decomposition | not determined |
| Viscosity, dynamic | not determined |

9.2. Other information

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No data available

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

temperatures: < 0 °C

temperatures: > 50 °C

10.5. Incompatible materials

strong acids, strong bases

10.6. Hazardous decomposition products

Ethanol in case of hydrolysis

11. Toxicological information**11.1. Information on toxicological effects**

No toxicological studies are available on the mixture.

Acute oral toxicity Acute toxicity estimate : > 5000 mg/kg
Method: Calculation method

Acute inhalation toxicity Acute toxicity estimate : > 10 mg/l / 4 h / dust/mist
Method: Calculation method

Skin irritation Irritating to skin.

Eye irritation Irritating to eyes.

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

Further information The toxicological data on this product have not been determined experimentally.

12. Ecological information**12.1. Toxicity**

No ecotoxicological studies are available on the mixture.

12.2. Persistence and degradability

Biodegradability No data available

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12.3. Bioaccumulative potential

Bioaccumulation No data available

12.4. Mobility in soil

Mobility No data available

12.5. Other adverse effects

Further Information An Expert Judgment stated that no classification is necessary based on present knowledge.

Ecotoxicology Assessment**· Isotridecanol, ethoxylated**

Chronic aquatic toxicity Harmful to aquatic life with long lasting effects.

13. Disposal considerations**13.1. Waste treatment methods****Product**

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.

Uncleaned packaging

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**Not dangerous according to transport regulations.**

- 14.1. UN number: --
14.2. UN proper shipping name: --
14.3. Transport hazard class(es): --
14.4. Packing group: --
14.5. Environmental hazards (Marine pollutant): --
14.6. Special precautions for user: Yes
Not dangerous according to transport regulations.

15. Regulatory information**US Federal Regulations**

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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

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**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 : | 1 |
| Physical Hazard : | 0 |

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NFPA Ratings

| | |
|----------------|---|
| Health : | 2 |
| Flammability : | 1 |
| Reactivity : | 0 |

16. Other information**Further information**

Revision date 03/21/2016

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 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 |
| 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 |
| 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 |

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|----------------|---|
| 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 | Low est observed adverse effect level |
| LOEL | Low est 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 |