



**SAFETY DATA SHEET****Protectosil® WS 808**

Material no.		Version	<b>8.0 / US</b>
Specification	<b>171425</b>	Revision date	<b>05/28/2015</b>
Order Number		Print Date	<b>08/26/2016</b>
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Symbol(s)



Signal word

Danger

Hazard statement

H227 - Combustible liquid.  
H314 - Causes severe skin burns and eye damage.

Precautionary statement  
Prevention

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P260 - Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 - Wash skin thoroughly after handling.  
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.

Precautionary statement  
Reaction

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 - Immediately call a POISON CENTER or doctor/ physician.  
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.

Precautionary statement  
Storage

P403 + P235 - Store in a well-ventilated place. Keep cool.  
P405 - Store locked up.

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****Chemical nature**

Aqueous solution

<b>• Tripotassium propylsilanetriolate</b>		<b>&lt; 50%</b>
CAS-No.	93857-00-2	
Skin corrosion		Category 1A
<b>• Potassium hydroxide</b>		<b>&lt; 5%</b>
CAS-No.	1310-58-3	
Acute toxicity (Oral)		Category 4
Skin corrosion		Category 1A
Serious eye damage		Category 1
<b>• NJTSR No.56705700001-7204P</b>		<b>&lt;= 30%</b>
CAS-No.	Trade Secret	
Remarks	Not a hazardous substance or mixture.	

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

Remove contaminated or saturated clothing immediately and follow safe disposal procedures.

**Inhalation**

If aerosol or mists are formed, take affected persons out into the fresh air. Possible discomfort include severe irritation of mucous lining (nose, throat, eyes), cough, sneezing and flow of tears. Call a physician immediately.

If breathing difficulties occur:

Keep patient half sitting with upper body raised.

**Skin contact**

Immediately wash with soap and water for at least fifteen minutes. Remove contaminated clothing and shoes. Obtain medical attention. Thoroughly wash clothing and shoes before reuse.

**Eye contact**

Rinse eye thoroughly immediately with plenty of water for at least 10 minutes. Continue rinsing process with eye rinsing solution. Protect uninjured eye. For caustic burn of the eyes, call an ambulance and obtain immediate medical treatment from an ophthalmologist.

**Ingestion**

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

**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**

If substance has been swallowed, apply therapy for chemical burn. Early endoscopy is recommended in order to assess mucosa lesions in the esophagus and stomach which may appear. If necessary, suck away left over substances.

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

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: High volume water jet.

**5.2. Special hazards arising from the substance or mixture**

The product itself does not burn.

May be released in case of fire: toxic gases/vapours. Combustible 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**

Water used to extinguish fire should not enter drainage systems, soil or stretches of water.

Ensure there are sufficient retaining facilities for water used to extinguish fire.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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.

As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

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**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**

Contain and collect spillage with non-combustible absorbent materials, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in a polyethylene-lined 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**

Provide sufficient ventilation and exhaust at the workplace. Ventilators required at emission site. Do not breathe in vapours, aerosols, sprays.

**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**

Store dry. Close container tightly

Unsuitable materials                      Light metals

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

**Advice on common storage**

Do not store near acids.

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

<b>• Potassium hydroxide</b>			
CAS-No.	1310-58-3		
Control parameters	2 mg/m <sup>3</sup>		Ceiling Limit Value:(ACGIH)
Control parameters	2 mg/m <sup>3</sup>		Ceiling Limit Value:(US CA OEL)

**8.2. Exposure controls****Engineering measures**

If possible, use material transfer/filling, metering and blending plants that are closed.  
If contact with gases or vapours cannot be excluded: 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**

Glove material for example, 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.

Use impermeable gloves.

Personal protective equipment that provides a barrier to prevent dermal exposure to this substance is required.

**Eye protection**

Use chemical splash goggles or face shield.

**Skin and body protection**

When handling larger quantities:

chemical protective suit, disposable protective clothing, acid-proof

A safety shower and eye wash fountain must be readily available.

To identify additional Personal Protective Equipment requirements, it is recommended that a hazard assessment be conducted before using this product.

**Hygiene measures**

Avoid contact with skin, eyes and clothing. Do not inhale vapors or aerosols. Do not eat, drink, or smoke when using the product. Remove contaminated or saturated clothing.

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**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.

Use protective clothing / face shield if necessary.

Do not breathe in vapours or aerosols.

Avoid contact with skin and eyes.

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

physical state	liquid
Colour	Colourless to light yellow, clear
Form	liquid
Odour	odourless
Odour Threshold	not determined
pH	> 13 (25 °C)
Melting point/range	no data available
Boiling point/range	105 °C (1013 hPa) Method: ASTM D-1120
Flash point	> 61 °C Method: DIN EN ISO 2719 (Pensky-Martens, Closed Cup)
Evaporation rate	not determined
Flammability (solid, gas)	not determined
Lower explosion limit	not determined
Upper explosion limit	not determined
Vapour density	no data available
Density	1.4 g/cm <sup>3</sup> Method: DIN 51757
Water solubility	no data available
Partition coefficient: n-octanol/water	not determined
Autoignition temperature	not determined
Thermal decomposition	not determined
Viscosity, dynamic	not determined
Viscosity, kinematic	no data available

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**9.2. Other information**

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      Exothermic reaction with: acids

**10.4. Conditions to avoid**

None known

**10.5. Incompatible materials**

Acids

**10.6. Hazardous decomposition products**

None known

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

Skin irritation      corrosive

Eye irritation      corrosive

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

Further information      No data is available on the product itself.

**Toxicological information on components****Tripotassium propylsilanetriolate**

Acute oral toxicity	LD50 Rat: > 5170 mg/kg
	Method: OECD Test Guideline 401
	Test substance: Structurally similar substance

Acute inhalation toxicity	LC50 Rat: > 22.2 mg/l / 4 h / Aerosol
	Method: OECD Test Guideline 403

Sensitization	Buehler Test Guinea pig: No sensitizing effects.
	Method: OECD Test Guideline 406

**Potassium hydroxide**

Acute oral toxicity	LD50 Rat: 333 - 388 mg/kg
	Method: OECD TG 425

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Skin irritation	Rabbit Causes severe burns.
Eye irritation	Rabbit Irreversible effects on the eye
Sensitization	skin sensitization Guinea pig: Does not cause skin sensitisation.
Gentotoxicity in vitro	S. typhimurium / E. coli negative Method: OECD TG 471

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**12. Ecological information****12.1. Toxicity**

*No ecotoxicological studies are available on the mixture.*

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

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



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**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.

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

**Uncleaned packaging**

Do not reuse empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities.

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.

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**14. Transport information****D.O.T. Road/Rail**

- |   |   |
|---|---|
| 14.1. UN number:                                | UN 3266   |
| 14.2. UN proper shipping name:                  | Corrosive liquid, basic, inorganic, n.o.s. (Tripotassium propylsilanetriolate, Potassium hydroxide) |
| 14.3. Transport hazard class(es):               | 8   |
| 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 3266   |
| 14.2. UN proper shipping name:      | Corrosive liquid, basic, inorganic, n.o.s. (Tripotassium propylsilanetriolate, Potassium hydroxide) |
| 14.3. Transport hazard class(es):   | 8   |
| 14.4. Packing group:                | II  |
| 14.5. Environmental hazards:        | --  |
| 14.6. Special precautions for user: | No  |

**Sea transport IMDG-Code/GGVSee (Germany)**

- |   |   |
|---|---|
| 14.1. UN number:                                | UN 3266   |
| 14.2. UN proper shipping name:                  | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Tripotassium propylsilanetriolate, Potassium hydroxide) |
| 14.3. Transport hazard class(es):               | 8   |
| 14.4. Packing group:                            | II  |
| 14.5. Environmental hazards (Marine pollutant): | --  |
| 14.6. Special precautions for user:             | Yes   |
| EmS:  | F-A,S-B   |
| IMDG Code segregation group 18 - Alkalis        |   |
| Clear of living quarters.                       |   |
| Keep separate from acids.                       |   |

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

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**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****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.

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**HMIS Ratings**

Health :	3
Flammability :	2
Physical Hazard :	1

**NFPA Ratings**

Health :	3
Flammability :	2
Reactivity :	1

**16. Other information****Further information**

Revision date 05/28/2015

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

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**Legend**

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

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