Safety Data Sheet
Snake Venom

1. IDENTIFICATION

Synonyms none
CAS# see Part 3, below
Material Use cleaner

IN AN EMERGENCY CALL: INFOTRAC 1-800-535-5053

2. HAZARD IDENTIFICATION

GHS Class skin corrosive STOT carcinogen
(Category) (1) (3) (3)
Signal Words DANGER WARNING WARNING

Hazard Statements
causes severe skin burns & eye damage (H314)
may cause respiratory tract irritation (H335)
suspected of causing cancer (H351)

GHS Precautionary Statements for Labeling
P262 Do not get in eyes, on skin or on clothing.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves and clothing of butyl or neoprene.
P273 Avoid release to the environment.
P391 Collect spillage.
P313 & P333 If skin irritation or rash occurs, get medical advice/attention.

3. COMPOSITION

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS NUMBER</th>
<th>%</th>
<th>TLV ppm / mg/m³</th>
<th>LD₅₀ (mg/kg) ORAL</th>
<th>LD₅₀ (mg/kg) SKIN</th>
<th>LC₅₀ ppm INHALATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Metasilicate (pentahydrate)</td>
<td>6834-92-0</td>
<td>5-10%</td>
<td>not listed</td>
<td>850</td>
<td>not known</td>
<td>not known</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>1-5%</td>
<td>20/100 (skin)</td>
<td>&gt;300</td>
<td>&gt;450</td>
<td>&gt;450</td>
</tr>
<tr>
<td>Glycol Ether DPM</td>
<td>34590-94-8</td>
<td>1-5%</td>
<td>100/605 (skin)</td>
<td>5130</td>
<td>&gt;13,000</td>
<td>above 500</td>
</tr>
<tr>
<td>Tetrasodium Ethylenediaminetetraacetic Acid</td>
<td>64-02-8</td>
<td>1-5%</td>
<td>not listed</td>
<td>&gt;1780</td>
<td>&gt;5000</td>
<td>not known</td>
</tr>
<tr>
<td>Alkylbenzenesulfonic Acid</td>
<td>on request</td>
<td>1-5%</td>
<td>not listed</td>
<td>above 500</td>
<td>not known</td>
<td>not known</td>
</tr>
<tr>
<td>Anionic Phosphate Ester (surfactant)</td>
<td>on request</td>
<td>1-5%</td>
<td>not listed</td>
<td>&gt;2000</td>
<td>not known</td>
<td>not known</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>balance</td>
<td>not toxic</td>
<td>90,000</td>
<td>not toxic</td>
<td>not toxic</td>
</tr>
</tbody>
</table>

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PLEASE ENSURE THAT THIS SDS IS GIVEN TO, AND EXPLAINED TO PEOPLE USING THIS PRODUCT.

EMERGENCY INFORMATION: INFOTRAC 1-800-535-5053
4. FIRST AID

SKIN: Wash with plenty of water. Remove contaminated clothing and do not reuse until laundered. Seek medical help promptly if there is persistent itching or redness in the affected area.

EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is any irritation.

INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If victim’s breathing stops, administer artificial respiration and seek medical aid promptly.

INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim’s head below hips to prevent inhalation of vomited material. Seek medical help promptly.

**NOTE:** Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity product. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

5. FLAMMABILITY & FIRE-FIGHTING

Flash Point: cannot burn
Autoignition Temperature: cannot burn
Flammable Limits: cannot burn
Combustion Products: carbon monoxide, nitrogen oxides, sulfur oxides
Firefighting Precautions: as for materials sustaining fire; firefighters must wear SCBA
Static Discharge: cannot accumulate a static charge

6. ACCIDENTAL RELEASE MEASURES

Leak Precaution: dike to control spillage and prevent environmental contamination
Handling Spill: ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep, shovel & store in closed containers for disposal

7. HANDLING & STORAGE

Store and use away from strong acids.
Avoid generating or breathing product vapor or mist. If mist or vapor form in use, install adequate ventilation to maintain airborne concentration of the product below regulated limits (see Part 8, below). Avoid contact with skin and wash work clothes frequently. An eye bath should be available near the workplace.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

2-Butoxyethanol:
- ACGIH TLV: 20ppm / 96mg/m³ (skin)
- ACGIH STEL: not listed
- OSHA PEL: 50ppm / 240mg/m³ (skin)
- OSHA STEL: not listed

Glycol Ether DPM:
- ACGIH TLV: 100ppm / 606mg/m³
- ACGIH STEL: not listed
- OSHA PEL: 100ppm / 600mg/m³
- OSHA STEL: 150ppm / 900mg/m³

Ventilation: mechanical ventilation is probably not required to control airborne vapor or mist to regulated limits
Hands: neoprene or butyl gloves should be resistant — always confirm suitability with supplier
Eyes: safety glasses with side shields or chemical goggles — always protect eyes!
Clothing: impermeable (hands, above) apron and boots may be worn if splashing is anticipated

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EMERGENCY INFORMATION: INFOTRAC 1-800-535-5053
**9. PHYSICAL AND CHEMICAL PROPERTIES**

- **Odor & Appearance**: clear, blue, liquid with lemon odor
- **Odor Threshold**: not known
- **Vapor Pressure**: as for water
- **Evaporation Rate (Butyl Acetate = 1)**: as for water
- **Vapor Density (air = 1)**: 0.6 (water vapor), 4.1 (2-butoxyethanol), 5.1 (Glycol Ether DPM)
- **Boiling Point**: approx. 105°C / 221°F
- **Freezing Point**: approx. -5°C / 23°F
- **Specific Gravity**: 1.06-1.07 (20/20°C)
- **Water Solubility**: complete
- **Viscosity**: not known – thin mobile liquid
- **pH**: 11.9 – strongly alkaline

**10. REACTIVITY**

- **Dangerously Reactive With**: none known
- **Also Reactive With**: strong acids
- **Chemical Stability**: stable; will not polymerize
- **Decomposes in Presence of**: not known
- **Decomposition Products**: none apart from Hazardous Combustion Products
- **Mechanical Impact**: not sensitive

**11. TOXICITY INFORMATION**

**i. ACUTE EXPOSURE**
- **Skin Contact**: corrosive to skin if contact is prolonged
- **Skin Absorption**: yes, slowly; toxic effects unlikely by this route
- **Eye Contact**: rapidly corrosive to eyes
- **Inhalation**: product mist likely to irritate respiratory system
- **Ingestion**: corrosive to mouth, throat and stomach; may cause belly pain, nausea, vomiting

**ii. CHRONIC EXPOSURE**
- **General**: prolonged or repeated exposure to dilute product may cause dermatitis
- **Sensitizing**: not a sensitizer
- **Carcinogen/Tumorigen**: not known as a tumorigen or a carcinogen in humans; 2-butoxyethanol is an animal carcinogen (A 3)
- **Reproductive Effect**: no known effect on humans or animals
- **Mutagen**: not known to be a mutagen or teratogen in humans or animals
- **Synergistic With**: not known
- **Calculated LD₅₀ (oral)**: 3290mg/kg (rat)
- **Calculated LD₅₀ (skin)**: 8375mg/kg (rabbit)
- **Calc. LC₅₀ (inhalation)**: insufficient data to calculate

**12. ECOLOGICAL INFORMATION**

**2-Butoxyethanol:**
- **Bioaccumulation**: rapidly eliminated from the body, cannot bioaccumulate; biological ½-life <48hr
- **Biodegradation**: biodegrades readily & rapidly in the presence of oxygen; 75%-100% in 20-28 days
- **Abiotic Degradation**: reacts with atmospheric hydroxyl radicals; estimated ½-life in air 16 hours
- **Mobility in soil, water**: water soluble; moves readily & rapidly in soil and water
- **Aquatic Toxicity**
  - **LC₅₀ (Fish, 96hr)**: 1490 & 2950mg/liter (Lepomis macrochirus), 1250mg/liter (Menidia beryllina),
  - **EC₅₀ (Crustacea, 24hr)**: 1700-1940 & 5000mg/liter (Daphnia magna), 600-1000mg/liter (Crangon crangon, 48hr)
  - **EC₅₀ (Algae)**: 35mg/liter (Microcistis aeruginosa), 900mg/liter (Scenedesmus quadricauda)
  - **EC₅₀ (Bacteria)**: 911mg/liter (Chilomonas paramecium), 700mg/liter (Pseudomonas putida)

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12. ECOLOGICAL INFORMATION, cont’d

Tetrasodium Ethylenediaminetetraacetic Acid:
Bioaccumulation not a bioaccumulator
Biodegradation various values reported from 1% in 72dy to 63% in 5dy (major component CAS# 64-02-8, only)
Abiotic Degradation not known
Mobility in soil, water highly water soluble; expected to bind to soil particles; may move slowly or not at all in soil & water
Aquatic Toxicity (for major component, CAS# 64-02-8, only)
LC50 (Fish, 96hr) 41, 159, 486, 532, 1030 & 2070mg/liter (Lepomis macrochirus), 60mg/liter (Pimephales promelas)
EC50 (Crustacea, 24hr) 610, 625 & 1030mg/liter (Daphnia magna), 4834mg/liter (Cragon crangon, 96hr) & others
EC50 (Algae) >100mg/liter (Scenedesmus subspicatus)
EC10 (Bacteria) 55mg/liter (Pseudomonas putida), >1000mg/liter (other bacteria)
EC10 (Microbes) 663mg/liter (Chilomonas paramecium)

Alkylbenzenesulfonic Acid:
Bioaccumulation not a bioaccumulator
Biodegradation biodegrades readily & rapidly in the presence of oxygen & industrial waste sludge; 90% in 4-5 days reported; far slower rates seen if adsorption to soil competes with bacterial degradation
Abiotic Degradation reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 8 hours
Mobility in soil, water water soluble; may move readily in soil & water; adsorption to soil may immobilise this substance
Aquatic Toxicity
LC50 (Fish, 96hr) 3.5-10mg/liter (Brachydanio rerio), 3.2-5.6mg/liter (Salmo gairdneri), 5-6mg/liter (Capitella capitata)
EC50 (Crustacea, 24hr) 7mg/liter (Rita rita), 5.6mg/liter (Scoleleptis fuliginosa), 2.6mg/liter (Leuciscus idus) & others
EC50 (Algae) 29mg/liter (Selenastrum capricornutum)
EC50 (Bacteria) 50mg/liter (Haematococcus pluvialis, 4 hr)

Sodium Metasilicate pentahydrate:
Bioaccumulation not a bioaccumulator
Biodegradation inorganic product – does not biodegrade
Abiotic Degradation water-soluble substance, dilutes readily in the environment; combines with metal ions to form insoluble calcium, aluminum, magnesium & iron silicates similar to naturally occurring silicates
Mobility in soil, water water soluble; moves readily in soil and water
Aquatic Toxicity
LC50 (Fish, 96hr) 365mg/liter (Brachydanio rerio), 4037mg/liter (Gambusia affinis)
EC50 (Crustacea, 96hr) 376mg/liter (Daphnia magna), 1100mg/liter (Lymnia sp.), 278mg/liter (Hyallela sp.)
EC50 (Algae) no data
EC50 (Bacteria) >1740mg/liter (Pseudomonas putida) – this is an LC50 – no inhibition at this dose

Anionic phosphate ester surfactant:
Bioaccumulation water soluble; will not bioaccumulate
Biodegradation readily biodegradable; >60% in 28 days; resulting phosphate is rapidly taken up by vegetation
Abiotic Degradation not known
Mobility in soil, water water soluble; moves readily through soil & the water column
Aquatic Toxicity
LC50 (Fish 96 hr) no data available
LC50 (Crustacea, 48hr) 1-10mg/liter (Daphnia magna)
EC50 (Algae, 96hr) no data available
LC50 (Microorganisms) no data available – ready biodegradability suggests low toxicity to bacteria

Glycol Ether DPM:
Bioaccumulation not a bioaccumulator due to high water solubility and rapid rate of elimination/metabolism
Biodegradation degrades readily in the presence of oxygen; various rates reported from 93% in 13d to 34% in 28d
Abiotic Degradation direct photolysis is reported to cause destruction with a ½-life of 3-4 hours
Mobility in soil, water water soluble; moves readily in soil and water
Aquatic Toxicity
LC50 (Fish, 96hr) 10,000mg/liter (Pimephales promelas),
LC50 (Crustacea, 48hr) above 1000mg/liter (Cragon crangon, 96hr), 1920mg/liter (Daphnia magna)
EC50 (Algae) no data available
EC10 (Bacteria) 4168mg/liter (Pseudomonas putida) – this is an EC10 not an EC50

EMERGENCY INFORMATION: INFOTRAC 1-800-535-5053
13. DISPOSAL CONSIDERATIONS

Waste Disposal: do not flush to sewer; disposal should be handled by a hazardous waste facility.

Containers:
- Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.
- Pails must be vented and thoroughly dried prior to crushing and recycling.

IBC (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5 years). Steel containers must be inspected, pressure tested & recertified every 5 years.

Warning: never cut, drill, weld or grind on or near this container, even if empty.

14. TRANSPORT INFORMATION

USA 49 CFR & Canada/International TDG

Product Identification Number: UN – 3266

Shipping Name: Corrosive liquid, basic, inorganic, N.O.S. (sodium metasilicate)

Classification: Class 8; Packing Group III

Marine Pollution: not a marine pollutant

ERAP Required: No

15. REGULATIONS

Canada DSL: on inventory

U.S.A. TSCA: on inventory

Europe EINECS: on inventory

16. OTHER INFORMATION

Date of Preparation: September 2014

Date of Revision: -

Prepared for PCS

With data from the Registry of Toxic Effects of Chemical Substances (RTECS), Hazardous Substance Data Base (HSDB), Cheminfo (CCOHS), OSHA, IUCLID Datasheets (European Chemical Substance Information System - ESIS), & others sources (below if used), as required/available