1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Triton® X-100
Product Number : X100
Brand : Sigma-Aldrich
Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Polyethylene glycol tert-octylphenyl ether
Formula : (C2H4O)nC14H22O

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
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<tbody>
<tr>
<td>9002-93-1</td>
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3. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
Harmful by ingestion.
Irritant

HMIS Classification
Health Hazard: 2
Flammability: 1
Physical hazards: 0

NFPA Rating
Health Hazard: 2
Fire: 1
Reactivity Hazard: 0

Health Hazard: 2
Fire: 1
Reactivity Hazard: 0
Potential Health Effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>May be harmful if inhaled. May cause respiratory tract irritation.</td>
</tr>
<tr>
<td>Skin</td>
<td>May be harmful if absorbed through skin. May cause skin irritation.</td>
</tr>
<tr>
<td>Eyes</td>
<td>May cause eye irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
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</table>

4. FIRST AID MEASURES

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**
If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

**Flammable properties**
- Flash point: 113 °C (235 °F) - closed cup
- Ignition temperature: no data available

**Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**
Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods for cleaning up**
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

**Handling**
Avoid inhalation of vapour or mist.
Normal measures for preventive fire protection.

**Storage**
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**
Handle with gloves.

**Eye protection**
Safety glasses

**Skin and body protection**
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
- Form: liquid, clear
- Colour: light yellow

**Safety data**
- **pH**: 9.7
- **Melting point**: 6 °C (43 °F)
- **Boiling point**: > 200 °C (> 392 °F)
- **Flash point**: 113 °C (235 °F) - closed cup
- **Ignition temperature**: no data available
- **Lower explosion limit**: no data available
- **Upper explosion limit**: no data available
- **Vapour pressure**: < 1.33 hPa (< 1.00 mmHg) at 20 °C (68 °F)
- **Density**: 1.0700 g/cm³
- **Water solubility**: soluble

10. STABILITY AND REACTIVITY

**Storage stability**
Stable under recommended storage conditions.

**Materials to avoid**
Strong acids, Strong bases, Strong oxidizing agents

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION
**Acute toxicity**
LD50 Oral - rat - male - 500 mg/kg
LD50 Dermal - rabbit - 8,000 mg/kg

**Irritation and corrosion**
Skin - rabbit - Mild skin irritation - 24 h
Eyes - rabbit - Severe eye irritation

**Sensitisation**
no data available

**Chronic exposure**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Signs and Symptoms of Exposure**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Potential Health Effects**
- **Inhalation**: May be harmful if inhaled. May cause respiratory tract irritation.
- **Skin**: May be harmful if absorbed through skin. May cause skin irritation.
- **Eyes**: May cause eye irritation.
- **Ingestion**: Harmful if swallowed.

**12. ECOLOGICAL INFORMATION**

**Elimination information (persistence and degradability)**
Biodegradability Result: 90 % - Readily biodegradable.

**Ecotoxicity effects**
- Toxicity to fish: LC50 - Pimephales promelas (fathead minnow) - 8.9 mg/l - 96 h
- Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia - 26 mg/l - 48 h

**Further information on ecology**
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**13. DISPOSAL CONSIDERATIONS**
**Product**
Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**
Dispose of as unused product.

### 14. TRANSPORT INFORMATION

**DOT (US)**
UN-Number: 3082  Class: 9  Packing group: III
Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (p-tertiary-Octylphenoxo polyethyl alcohol)

**IMDG**
UN-Number: 3082  Class: 9  Packing group: III  EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (p-tertiary-Octylphenoxy polyethyl alcohol)
Marine pollutant: Marine pollutant

**IATA**
UN-Number: 3082  Class: 9  Packing group: III
Proper shipping name: Environmentally hazardous substance, liquid n.o.s. (p-tertiary-Octylphenoxy polyethyl alcohol)

### 15. REGULATORY INFORMATION

**OSHA Hazards**
Harmful by ingestion., Irritant

**TSCA Status**
On TSCA Inventory

**DSL Status**
All components of this product are on the Canadian DSL list.

**SARA 302 Components**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
Acute Health Hazard

**Massachusetts Right To Know Components**
No Components Listed

**Pennsylvania Right To Know Components**

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**New Jersey Right To Know Components**

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**California Prop. 65 Components**
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

### 16. OTHER INFORMATION

**Further information**
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