1. Identification

Product identifier: STEOL TSP-16N

Recommended use: Surfactant

Recommended restrictions: For industrial use only.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer:

- Company name: Stepan Company
- Address: 22 West Frontage Road
  Northfield, IL 60093
  USA
- Telephone: General 1-847-446-7500
- Emergency phone number:
  - Medical: 1-800-228-5635
  - Chemtrec: 1-800-424-9300
  - Chemtrec Int'l: +1 703-527-3887

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Serious eye damage/eye irritation Category 2B

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

- Hazard symbol: None.
- Signal word: Warning
- Hazard statement: Causes eye irritation.

Precautionary statement:

- Prevention: Wash thoroughly after handling.
- Response: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Storage: Store away from incompatible materials.
- Disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: Not applicable.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tristyrylphenol ether sulfate, ammonium salt</td>
<td></td>
<td>119432-41-6</td>
<td>&gt;93</td>
</tr>
<tr>
<td>Tristyrylphenol ethoxylate (Alt CASs 104376-75-2 &amp; 70559-25-0)</td>
<td></td>
<td>99734-09-5</td>
<td>1 - &lt; 3</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td></td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>

4. First-aid measures

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact: Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact

Rinse with water. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur. Do not induce vomiting.

Most important symptoms/effects, acute and delayed

Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed

Treat symptomatically.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Avoid contact with skin. Observe good industrial hygiene practices. Wear appropriate personal protective equipment.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container.

8. Exposure controls/personal protection

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

If contact is likely, safety glasses with side shields are recommended.

Skin protection

Hand protection

For prolonged or repeated skin contact use suitable protective gloves.

Other

Wear suitable protective clothing. Wear protective gloves.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Amber.</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>5 - 6 (5% 1:1 IPA:H2O)</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 201.0 °F (≥ 93.9 °C)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Upper/lower flammability or explosive limits</strong></td>
<td></td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Solubility(ies)</strong></td>
<td></td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>10000 cP @ 25C</td>
</tr>
<tr>
<td><strong>Other information</strong></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>9.62 lb/gal @ 25C</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reactivity</strong></td>
<td>The product is stable and non-reactive under normal conditions of use, storage and transport.</td>
</tr>
<tr>
<td><strong>Chemical stability</strong></td>
<td>Material is stable under normal conditions.</td>
</tr>
<tr>
<td><strong>Possibility of hazardous reactions</strong></td>
<td>No dangerous reaction known under conditions of normal use.</td>
</tr>
<tr>
<td><strong>Conditions to avoid</strong></td>
<td>Avoid temperatures exceeding the flash point. Contact with incompatible materials.</td>
</tr>
<tr>
<td><strong>Incompatible materials</strong></td>
<td>Strong oxidizing agents. Isocyanates.</td>
</tr>
<tr>
<td><strong>Hazardous decomposition products</strong></td>
<td>Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons.</td>
</tr>
</tbody>
</table>

11. Toxicological information

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information on likely routes of exposure</strong></td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>No adverse effects due to inhalation are expected.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Causes mild skin irritation.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Causes eye irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Expected to be a low ingestion hazard.</td>
</tr>
<tr>
<td><strong>Symptoms related to the physical, chemical and toxicological characteristics</strong></td>
<td>Direct contact with eyes may cause temporary irritation. Mild skin irritation.</td>
</tr>
<tr>
<td><strong>Information on toxicological effects</strong></td>
<td></td>
</tr>
</tbody>
</table>
### Acute toxicity

Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEOL TSP-16N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Oral LD50</td>
<td>Rat</td>
<td>&gt; 5 g/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation Causes mild skin irritation.

Serious eye damage/eye irritation Causes eye irritation.

### Respiratory or skin sensitization

- **Respiratory sensitization**: Not available.
- **Skin sensitization**: This product is not expected to cause skin sensitization.
- **Germ cell mutagenicity**: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

### Carcinogenicity

- **IARC Monographs. Overall Evaluation of Carcinogenicity**: Not listed.
- **US. National Toxicology Program (NTP) Report on Carcinogens**: Not listed.

### Reproductive toxicity

- **This product is not expected to cause reproductive or developmental effects.**

### Specific target organ toxicity - single exposure

- **Not applicable.**

### Specific target organ toxicity - repeated exposure

- **Not applicable.**

### Aspiration hazard

- **Not applicable.**

### Ecological information

#### Ecotoxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEOL TSP-16N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea EC50</td>
<td>Daphnia</td>
<td>550 mg/l, 24 hours</td>
</tr>
<tr>
<td>Fish LC50</td>
<td>Fish</td>
<td>3000 mg/l, 48 hours</td>
</tr>
</tbody>
</table>

### Persistence and degradability

- Expected to be inherently biodegradable.

### Bioaccumulative potential

- No data available.

### Mobility in soil

- No data available.

### Other adverse effects

- No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### Disposal considerations

- **Disposal instructions**: Dispose in accordance with all applicable regulations.
- **Hazardous waste code**: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
- **Waste from residues / unused products**: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
- **Contaminated packaging**: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available.

15. Regulatory information

Polymer
Polymer exempt in the following countries: Europe

US federal regulations
Polymer exempt in the United States

- TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
  Not regulated.

- CERCLA Hazardous Substance List (40 CFR 302.4)
  Not listed.

- SARA 304 Emergency release notification
  Not regulated.

  Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

- SARA 302 Extremely hazardous substance
  Not listed.

- SARA 311/312 Hazardous chemical
  Yes
  Classified hazard categories
  Serious eye damage or eye irritation

- SARA 313 (TRI reporting)
  Not regulated.

Other federal regulations

- Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
  Not regulated.

- Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
  Not regulated.

- Safe Drinking Water Act (SDWA)
  Not regulated.

US state regulations

- California Proposition 65
  WARNING: This product can expose you to chemicals including Ethylene oxide, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

  California Proposition 65 - CRT: Listed date/Carcinogenic substance
  - Styrene, monomer (Benzene, ethenyl-) (CAS 100-42-5) Listed: April 22, 2016
  - Diethanolamine (CAS 111-42-2) Listed: June 22, 2012
  - Ethylene oxide (CAS 75-21-8) Listed: July 1, 1987

  California Proposition 65 - CRT: Listed date/Developmental toxin
  - Ethylene oxide (CAS 75-21-8) Listed: August 7, 2009

  California Proposition 65 - CRT: Listed date/Female reproductive toxin
  - Ethylene oxide (CAS 75-21-8) Listed: February 27, 1987

  California Proposition 65 - CRT: Listed date/Male reproductive toxin
  - Ethylene oxide (CAS 75-21-8) Listed: August 7, 2009
### International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory (NZIoC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s). A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### 16. Other information, including date of preparation or last revision

- **Issue date**: 01-30-2015
- **Revision date**: 07-27-2018
- **Version #**: 03

### Disclaimer

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### Revision information

- **Identification**: Recommended restrictions
- **Hazard(s) identification**: Response
- **Hazard(s) identification**: Supplemental information
- **Composition / Information on Ingredients**: Ingredients
- **Physical & Chemical Properties**: Multiple Properties
- **Ecological Information**: Ecotoxicity
- **Regulatory information**: California Proposition 65
- **HazReg Data**: International Inventories
- **GHS**: Classification