1. Identification

Product identifier: POLYSTEP TSP-16PE30

Other means of identification:
- Product code: 8151
- Recommended use: Surfactant
- Recommended restrictions: For industrial use only.

Manufacturer/Importer/Supplier/Distributor information:
- Manufacturer: Stepan Company
  - Address: 22 West Frontage Road
  - 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:
- Skin corrosion/irritation: Category 2
- Serious eye damage/eye irritation: Category 1

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements:
- Signal word: Danger
- Hazard statement: Causes skin irritation. Causes serious eye damage.

Precautionary statement:
- Prevention: Wear eye/face protection. Wash thoroughly after handling. Wear protective gloves.
- Response: If on skin: Wash with plenty of water. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.
- 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>Water</td>
<td></td>
<td>7732-18-5</td>
<td>60 - 80</td>
</tr>
<tr>
<td>Polyarylphenyl ether phosphate</td>
<td></td>
<td>114535-82-9</td>
<td>20 - 40</td>
</tr>
<tr>
<td>Phosphoric Acid</td>
<td></td>
<td>7664-38-2</td>
<td>&lt; 5</td>
</tr>
</tbody>
</table>
4. First-aid measures

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

**Skin contact**
Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

**Ingestion**
Rinse mouth. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Do not induce vomiting without advice from poison control center.

**Most important symptoms/effects, acute and delayed**
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information**
In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). 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. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

**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. Prevent entry into waterways, sewer, basements or confined areas. 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.

**Never return spills to original containers for re-use.**

**Environmental precautions**
Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

**Precautions for safe handling**
Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains.

**Conditions for safe storage, including any incompatibilities**
Store in original tightly closed container.
8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>Phosphoric Acid (CAS 7664-38-2)</td>
<td>PEL</td>
<td>1 mg/m3</td>
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<tr>
<td>Phosphoric Acid (CAS 7664-38-2)</td>
<td>STEL</td>
<td>3 mg/m3</td>
</tr>
<tr>
<td>Phosphoric Acid (CAS 7664-38-2)</td>
<td>TWA</td>
<td>1 mg/m3</td>
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US. ACGIH Threshold Limit Values

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US. NIOSH: Pocket Guide to Chemical Hazards

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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
Wear safety glasses with side shields (or goggles).

Skin protection
Hand protection
Wear appropriate chemical resistant gloves.

Other
Wear appropriate chemical resistant clothing.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
When using, do not eat, drink or smoke. 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

Appearance
Viscous.

Physical state
Liquid.

Form
Not available.

Color
Yellow.

Odor
Mild.

Odor threshold
Not available.

pH
1 - 2.5 (10% in water)

Melting point/freezing point
< 41 °F (< 5 °C)

Initial boiling point and boiling range
> 212 °F (> 100 °C)

Flash point
> 201.0 °F (> 93.9 °C) Pensky-Martens Closed Cup

Evaporation rate
Not available.

Flammability (solid, gas)
Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)
Not available.

Flammability limit - upper (%)
Not available.

Explosive limit - lower (%)
Not available.

Explosive limit - upper (%)
Not available.

Vapor pressure
Not available.
Vapor density: Not available.
Relative density: Not available.
Solubility(ies):
  Solubility (water): Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: 1500 cP @ 25C
Other information:
  Density: 8.89 lb/gal @ 25C
  Pour point: < 41 °F (< 5 °C)

10. Stability and reactivity
Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
Conditions to avoid: Avoid temperatures exceeding the flash point. Reacts violently with strong alkaline substances. This product may react with reducing agents. Do not mix with other chemicals. Contact with incompatible materials.
Incompatible materials: This product may react with reducing agents. Incompatible with bases.
Hazardous decomposition products: No hazardous decomposition products are known.

11. Toxicological information
Information on likely routes of exposure:
  Inhalation: No adverse effects due to inhalation are expected.
  Skin contact: Causes skin irritation.
  Eye contact: Causes serious eye damage.
  Ingestion: Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics:
  Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.
Information on toxicological effects:
  Acute toxicity: Not available.
  Skin corrosion/irritation: Causes skin irritation.
  Serious eye damage/eye irritation: Causes serious eye damage.
Respiratory or skin sensitization:
  Respiratory sensitization: Based on available data, the classification criteria are not met.
  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:
  This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
    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.

12. Ecological information

Ecotoxicity

Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

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.

13. Disposal considerations

Disposal instructions

Dispose of contents/container in accordance with local/regional/national/international 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

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Phosphoric Acid (CAS 7664-38-2) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

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

Skin corrosion or irritation

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)
FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Phosphoric Acid (CAS 7664-38-2) High priority

US state regulations
California Proposition 65
US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
Phosphoric Acid (CAS 7664-38-2)

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>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>Yes</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 09-15-2014
Revision date 02-20-2020
Version # 03
HMIS® ratings
Health: 3
Flammability: 1
Physical hazard: 0

NFPA ratings
Health: 3
Flammability: 1
Instability: 0

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Revision information
Identification: Recommended restrictions
Hazard(s) identification: Response
Hazard(s) identification: Supplemental information
Composition / Information on Ingredients: Disclosure Overrides
Physical & Chemical Properties: Multiple Properties
Toxicological Information: Toxicological Data
Ecological Information: Ecotoxicity
Transport Information: Material Transportation Information
Regulatory Information: United States
HazReg Data: International Inventories