1. Identification

**Product identifier** STEPANATE STS-90

**Other means of identification**
- **Product code**: 7810
- **Recommended use**: Surfactant
- **Recommended restrictions**: For industrial use only.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**
- **Company name**: Stepan UK Limited
- **Address**: Bridge Str., Stalybridge, England
- **Telephone**
  - General (Stalybridge): +44(0)161 338 5511
  - General (USA): 1-847-446-7500
- **E-mail**: Not available.

**Emergency phone number**
- Medical (USA): 1-800-228-5635
- Chemtrec (USA): 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 2A

**Environmental hazards** Not classified.

**OSHA defined hazards** Combustible dust

**Label elements**

**Signal word** Warning

**Hazard statement** May form combustible dust concentrations in air. Causes serious eye irritation.

**Precautionary statement**
- **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>Sodium toluenesulfonate</td>
<td></td>
<td>12068-03-0</td>
<td>90 - 100</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
Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. 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

Unsuitable extinguishing media
Carbon dioxide (CO2).

Specific hazards arising from the chemical
Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. 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
In case of fire and/or explosion do not breathe fumes. In the event of fire, cool tanks with water spray. Move containers from fire area if you can do so without risk.

Specific methods
Cool containers exposed to flames with water until well after the fire is out.

General fire hazards
May form combustible dust concentrations in air.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Use only non-sparking tools. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water.

Large Spills: Collect spillage. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect dust using a vacuum cleaner equipped with HEPA filter. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Minimize dust generation and accumulation. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

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 handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Ground/bond container and receiving equipment. Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid breathing dust. Do not get this material on clothing. Wear personal protective equipment. Wash thoroughly after handling. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities
Keep away from heat, sparks and open flame. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Store in original tightly closed container. Store in a well-ventilated place. Guard against dust accumulation of this material. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
8. Exposure controls/personal protection

**Occupational exposure limits**
This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.

**Biological limit values**
No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**
Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. 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) and a face shield. Use tight fitting goggles if dust is generated.

**Skin protection**
Wear appropriate chemical resistant gloves.

**Hand protection**
Wear appropriate chemical resistant clothing.

**Respiratory protection**
Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

**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**

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Solid.</td>
</tr>
</tbody>
</table>

**Physical state**

Class II Dust for National Electric Code (NFPA 70)

- **Pmax** = 7.0 +/- 10% bar
- **Kst** = 131 +/- 12% bar m/s

- **Minimum Ignition Energy (MIE)** = > 1000 mJ
- **Minimum Explosive Concentration (MEC)** = 85 g/m³
- **Minimum Autoignition Temperature (MAIT Cloud)** = 540 °C
- **Limiting Oxygen Concentration (LOC)** = 11.5 +/- 0.5% vol. %
- **Mean particle size** = 28 (99% < 75) micrometer

- **Color**: White.

- **Odor**: Not available.

- **Odor threshold**: Not available.

- **pH**: 7 - 9 (1% aqueous solution)

- **Melting point/freezing point**: Not available.

- **Initial boiling point and boiling range**: Not available.

- **Flash point**: > 201.0 °F (> 93.9 °C)

- **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)**: Soluble

- **Auto-ignition temperature**: Not available.
Decomposition temperature  Not available.
Viscosity  Not available.

Other information
- Bulk density  550 kg/m3
- Percent volatile  7 - 8%

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. Contact with incompatible materials. Dust may form explosive mixture in air.
Incompatible materials  Strong oxidizing agents. Strong acids.

Hazardous decomposition products  Upon decomposition, this product may yield sulfur dioxide and oxides of sulfur.

11. Toxicological information

Information on likely routes of exposure
- Inhalation  No adverse effects due to inhalation are expected.
- Skin contact  Causes mild skin irritation.
- Eye contact  Causes serious eye irritation.
- 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.

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEPANATE STS-90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>6500 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td></td>
<td>Prolonged skin contact may cause temporary irritation.</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td></td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

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  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.
12. Ecological information

Ecotoxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEPANATE STS-90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>EC50</td>
<td>230 mg/l, 72 hours</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>&gt; 400 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>1060 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability: Expected to be ultimately 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.

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.


SARA 304 Emergency release notification: Not regulated.


Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance: Not listed.

SARA 311/312 Hazardous chemical: Yes
Combustible dust
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.

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>Yes</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>Yes</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: 04-01-2015
Revision date: 05-01-2018
Version # 02

Further information
Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

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Revision information
Identification: Recommended restrictions
Hazard(s) identification: Prevention
Hazard(s) identification: Response
Hazard(s) identification: Hazard(s) not otherwise classified (HNOC)
Hazard(s) identification: Supplemental information
Physical & Chemical Properties: Multiple Properties
Regulatory information: California Proposition 65
HazReg Data: International Inventories
GHS: Classification