1. Identification

Product identifier: BIO-SOFT D-40

Other means of identification

- **Product code**: 0458
- **Recommended use**: Surfactant
- **Recommended restrictions**: For industrial use only.

Manufacturer/Importer/Supplier/Distributor information

- **Manufacturer**: Stepan Company
- **Address**: 22 West Frontage Road, Northfield, IL 60093, USA
- **Telephone**: General 1-847-446-7500, Medical 1-800-228-5635, Chemtrec 1-800-424-9300, Chemtrec Int'l +1 703-527-3887
- **E-mail**: Not available.

2. Hazard(s) identification

**Physical hazards**: Not classified.

**Health hazards**
- Acute toxicity, oral: Category 4
- Skin corrosion/irritation: Category 2
- Serious eye damage/eye irritation: Category 2A

**Environmental hazards**
- Hazardous to the aquatic environment, acute hazard: Category 2
- Hazardous to the aquatic environment, long-term hazard: Category 3

**OSHA defined hazards**: Not classified.

**Label elements**

- **Signal word**: Warning
- **Hazard statement**: Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
- **Precautionary statement**
  - **Prevention**: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves. Wear eye/face protection.
  - **Response**: If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
  - **Storage**: Store away from incompatible materials.
  - **Disposal**: Dispose of contents/container in accordance with local/regional/national/international regulations.
- **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>50 - &lt; 60</td>
</tr>
<tr>
<td>Sodium (C10-16) benzenesulfonate (Alternate CAS 25155-30-0; 68411-30-3)</td>
<td></td>
<td>68081-81-2</td>
<td>30 - &lt; 40</td>
</tr>
<tr>
<td>Sodium xylenesulphonate (SXS)</td>
<td></td>
<td>1300-72-7</td>
<td>2 - 4</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td></td>
<td>1 - &lt; 3</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 if irritation develops and persists.

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.

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

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

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. 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: Clear.

Physical state: Liquid.

Form: Liquid.

Color: Pale yellow

Odor: Mild.

Odor threshold: Not available.

pH: 7 - 9 (10% in water)

Melting point/freezing point: 24.8 °F (-4 °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: Estimated slower than ethyl ether.

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: Estimated lighter than air.

Relative density: Not available.

Solubility(ies):

Solubility (water): Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.
Viscosity
870 cP @ 25C

Other information
Percent volatile
60 - 62 %
Pour point
30.2 °F (-1 °C)
Specific gravity
1.07 @ 25C

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.
Incompatible materials
Strong oxidizing agents.
Hazardous decomposition products
Sulfur oxides.

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 irritation.
Ingestion
Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Information on toxicological effects
Acute toxicity
Harmful if swallowed.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO-SOFT D-40</td>
<td>Liquid Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal Liquid</td>
<td>Rabbit</td>
<td>&gt; 1000 mg/kg</td>
</tr>
<tr>
<td>Oral Liquid</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Causes skin irritation.
Serious eye damage/eye irritation
Causes serious 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
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
Not regulated.
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
Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO-SOFT D-40</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>Algae 29 mg/l, 96 hours</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia 2.4 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fish 1.67 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
Expected to be readily 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
UN number: UN3082
UN proper shipping name: Environmentally hazardous substance, liquid, N.O.S. (Sodium (C10-16) Benzenesulfonate), MARINE POLLUTANT
Transport hazard class(es)
Class: 9
Subsidiary risk: -
Packing group: III
Environmental hazards: Yes
Marine pollutant: Yes
Special precautions for user: Not available.

IATA
UN number: UN3082
UN proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Sodium (C10-16) benzenesulfonate)
Transport hazard class(es)
Class: 9
Subsidiary risk: -
Packing group: III
Environmental hazards: Yes
Special precautions for user: Not available.

IMDG
UN number: UN3082
UN proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (Sodium (C10-16) benzenesulfonate), MARINE POLLUTANT
Transport hazard class(es)
Class: 9
Subsidiary risk: -
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)
Not 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
Acute toxicity (any route of exposure)
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.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance 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>Taiwan</td>
<td>Taiwan Inventory (TCSI)</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
06-02-2014

Revision date
06-26-2019

Version # 05

Disclaimer
Terms and Conditions. This SDS is designed only as guidance for the products to which it applies. To the greatest extent permitted by applicable law, nothing contained herein creates any legal obligation including contractual obligations, expressed or implied warranties, including any warranties of merchantability or fitness for particular purpose; or confers any intellectual property rights, including rights to use trademarks or a license to use patents, issued or pending. The information contained herein is based on the manufacturer's own study and the work of others, and is subject to change at any time without further notice. There is no warranty, expressed or implied, as to the accuracy, completeness or adequacy of the information contained herein, and neither the provider nor the manufacturer (nor the agents, directors, officers, contractors or employees of either) are liable to any party for any damages of any nature, including direct, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy or furnishing of any information in this SDS, or in any other way related (directly or indirectly) to this SDS. The receipt and use of this information constitutes consent to these terms and conditions.

Revision information
Identification: Recommended restrictions
Hazard(s) identification: Disposal
Hazard(s) identification: Response
Hazard(s) identification: Supplemental information
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Stability and reactivity: Hazardous decomposition products
Transport Information: Material Transportation Information
HazReg Data: International Inventories
GHS: Classification