

## 1. Identification

**Product identifier** BIO-SOFT S-101  
**Other means of identification**  
**Product code** 1737  
**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  
**E-mail** Not available.  
**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** Acute toxicity, oral Category 4  
 Skin corrosion/irritation Category 1  
 Serious eye damage/eye irritation Category 1  
 Carcinogenicity Category 1  
**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** Danger

**Hazard statement** Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. May cause cancer. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

**Response** If swallowed: Call a poison center/doctor if you feel unwell. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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. Specific treatment (see this label). Wash contaminated clothing before reuse.

**Storage** Store locked up.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

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

**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Alkyl(C10-16)benzenesulfonic acid (Alt CAS 27176-87-0 85536-14-7)		68584-22-5	90 - 100
Alkyl Benzene-Ln. (C10-13)		129813-58-7	1 - < 3
Sulfuric acid		7664-93-9	1 - < 3
Other components below reportable levels			< 1

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Dry chemical, foam, carbon dioxide, water fog.
<b>Unsuitable extinguishing media</b>	Water. Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. 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. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Should not be released into the environment.  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.
<b>Environmental precautions</b>	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. 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

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not taste or swallow. Avoid prolonged exposure. Do not get this material on 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. Wash contaminated clothing before reuse. Avoid release to the environment. Do not empty into drains.

### Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sulfuric acid (CAS 7664-93-9)	PEL	1 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Sulfuric acid (CAS 7664-93-9)	TWA	0.2 mg/m <sup>3</sup>	Thoracic fraction.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sulfuric acid (CAS 7664-93-9)	TWA	1 mg/m <sup>3</sup>

### 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 eye/face protection. Wear safety glasses with side shields (or goggles) and a face shield.

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

#### Skin protection

**Other** Wear appropriate chemical resistant clothing. Wear protective gloves.

#### Skin protection

#### 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

**Physical state** Liquid.

**Form** Viscous. Liquid.

**Color** Dark amber.

**Odor** Not available.

**Odor threshold** Not available.

**pH** < 1.0000 as is

**Melting point/freezing point** -0.4 °F (-18 °C)

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

**Flash point** > 201 °F (> 93.9 °C)

**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 APPLICABLE.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not Determined or Unknown
Vapor density	Estimated heavier than air
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	890 cps (@ 25 C)
Other information	
Density	8.81 lbs/gal @ 25 C
Pour point	5 °F (-15 °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	Heat, flames and sparks. Reacts violently with strong alkaline substances. This product may react with reducing agents. 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

Ingestion	Causes digestive tract burns. Harmful if swallowed.
Inhalation	Prolonged inhalation may be harmful. May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns. May be harmful in contact with skin.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

##### Information on toxicological effects

Acute toxicity Harmful if swallowed. May be harmful in contact with skin.

Product	Species	Test Results
BIO-SOFT S-101		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Rat	500 - 2000 mg/kg
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation	Causes serious eye damage.	
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	May cause cancer. IARC Category 1: Strong inorganic acid mists containing sulfuric acid.	

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not applicable.
<b>Specific target organ toxicity - repeated exposure</b>	Not applicable.
<b>Aspiration hazard</b>	Not applicable.

**12. Ecological information**

**Ecotoxicity** Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

<b>Product</b>		<b>Species</b>	<b>Test Results</b>
BIO-SOFT S-101			
Algae	EC50	Algae	47.3 mg/l, 72 hours
Crustacea	EC50	Daphnia	2.4 mg/l, 48 hours
Fish	LC50	Fish	1.67 mg/l, 96 hours

**Persistence and degradability** 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**

<b>UN number</b>	UN3265
<b>UN proper shipping name</b>	Corrosive liquid, acidic, organic, N.O.S. (Alkylbenzene sulfonic acid, Sulfuric acid RQ = 76336 lbs)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**IATA**

<b>UN number</b>	UN3265
<b>UN proper shipping name</b>	Corrosive liquid, acidic, organic, N.O.S. (Alkylbenzene sulfonic acid, Sulfuric acid)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	No
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

<b>UN number</b>	UN3265
<b>UN proper shipping name</b>	Corrosive liquid, acidic, organic, N.O.S. (Alkylbenzene Sulfonic Acid, Sulfuric acid)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No

EmS

Not available.

Special precautions for user

Read safety instructions, SDS and emergency procedures before handling.

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

Not available.

DOT



IATA; IMDG



### 15. Regulatory information

US federal regulations

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

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Sulfuric acid (CAS 7664-93-9)

Listed.

**US EPCRA Section 304 Extremely Haz. Subs. & CERCLA Haz. Subs.: Section 304 EHS reportable quantity**

Sulfuric acid (CAS 7664-93-9)

1000 lbs

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

No

**SARA 311/312 Hazardous chemical**

Yes

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Sulfuric acid	7664-93-9	1 - < 3

**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

**Safe Drinking Water Act (SDWA)**

Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Sulfuric acid (CAS 7664-93-9) 6552

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Sulfuric acid (CAS 7664-93-9) 20 % weight/volumn

**DEA Exempt Chemical Mixtures Code Number**

Sulfuric acid (CAS 7664-93-9) 6552

**US state regulations**

**WARNING:** This product may contain a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Strong inorganic mists containing sulfuric acid (if customers intended use generates an acid mist)

**US - New Jersey Community RTK (EHS Survey): Reportable threshold**

Sulfuric acid (CAS 7664-93-9) 500 lbs

**US - Pennsylvania RTK - Hazardous Substances: Listed substance**

Sulfuric acid (CAS 7664-93-9)

**US. Massachusetts RTK - Substance List**

Sulfuric acid (CAS 7664-93-9)

**US. Rhode Island RTK**

Sulfuric acid (CAS 7664-93-9)

**US. California Proposition 65**

**WARNING:** This product may contain a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Strong inorganic mists containing sulfuric acid (if customers intended use generates an acid mist)

**WARNING:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

\_Sulfur dioxide (CAS 7446-09-5) Listed: July 29, 2011

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*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).

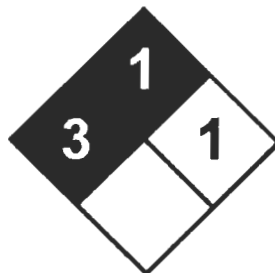
**16. Other information, including date of preparation or last revision**

**Issue date** 01-15-2015

**Revision date** 01-15-2015

**Version #** 04

**NFPA ratings**



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