

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	1101 Skokie Blvd. Northbrook, IL 60062 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
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. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.	
Precautionary statement		
Prevention	Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.	
Response	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 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) (Alternate CAS: 67774-74-7)		129813-58-7	1 - < 3
Sulfuric acid		7664-93-9	1 - < 3

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	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.
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. Call a physician or poison control center immediately.
Ingestion	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.
Most important symptoms/effects, acute and delayed	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.
Indication of immediate medical attention and special treatment needed	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.
General information	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

Suitable extinguishing media	Dry chemical, foam, carbon dioxide, water fog.
Unsuitable extinguishing media	Water. 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. 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.
Methods and materials for containment and cleaning up	Should not be released into the environment. Prevent entry into waterways, sewer, basements or confined areas. 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. 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 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. Do not get this material on clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container.

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/m3

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Sulfuric acid (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sulfuric acid (CAS 7664-93-9)	TWA	1 mg/m3

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.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant 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

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 (as is)

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

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

Flash point Not applicable

Evaporation rate Estimated slower than ethyl ether

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

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 cP @ 25C

Other information

Density 8.81 lb/gal @ 25C

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**

Inhalation May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact Causes severe skin burns. May be harmful in contact with skin.

Eye contact Causes serious eye damage.

Ingestion Causes digestive tract burns. Harmful if swallowed.

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		
<u>Acute</u>		
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 a respiratory sensitizer.	
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 The International Agency for Research on Cancer (IARC) has concluded that occupational exposure to strong-inorganic acid mists containing sulfuric acid is carcinogenic to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

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

Persistence and degradability Readily biodegradable.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Sulfuric acid -2.2

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

General The provided transportation classifications are for bulk shipments only and may not be representative of all package/shipment sizes.

DOT

UN number UN3265

UN proper shipping name Corrosive liquid, acidic, organic, N.O.S. (Alkylbenzene sulfonic acid, Sulfuric acid RQ = 62500 LBS)

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group II

Special precautions for user Not available.

IATA

UN number UN3265

UN proper shipping name RQ, Corrosive liquid, acidic, organic, N.O.S. (Alkylbenzene sulfonic acid, Sulfuric acid)

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group II

Environmental hazards No

Special precautions for user Not available.

IMDG

UN number UN3265
UN proper shipping name RQ, Corrosive liquid, acidic, organic, N.O.S. (Alkylbenzene Sulfonic Acid, Sulfuric acid)
Transport hazard class(es)
Class 8
Subsidiary risk -
Packing group II
Environmental hazards
Marine pollutant No
EmS Not available.
Special precautions for user Not available.
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.

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)

Sulfuric acid (CAS 7664-93-9) Listed.

SARA 304 Emergency release notification

Sulfuric acid (CAS 7664-93-9) 1000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Sulfuric acid	7664-93-9	1000	1000		

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)

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 %WV

DEA Exempt Chemical Mixtures Code Number

Sulfuric acid (CAS 7664-93-9) 6552

US state regulations**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Sulfuric acid (CAS 7664-93-9)

California Proposition 65

WARNING: This product can expose you to chemicals including Strong Inorganic Mists Containing Sulfuric Acid, 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

1,4-dioxane (CAS 123-91-1) Listed: January 1, 1988

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 Industrial Chemicals (AIIC)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
New Zealand	New Zealand Inventory (NZIoC)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Inventory (TCSI)	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	05-22-2014
Revision date	11-21-2022
Version #	13

HMIS® ratings

Health: 3
Flammability: 1
Physical hazard: 0

NFPA ratings

Health: 3
Flammability: 1
Instability: 0

Disclaimer

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Revision information

Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Other information, including date of preparation or last revision: References
GHS: Classification