

## Product Bulletin

### BIO-SOFT® GSB-9

Product Name

Chemical Description

Applications

Typical Properties

Nonionic Blend

BIO-SOFT GSB-9 is a nonionic surfactant blend unique to Stepan. It provides moderate, stable foam, good wetting and high detergency in a wide range of industrial applications and cleaning products. It is water soluble and is effective at low concentrations, with a quick dissolution rate. It can also be used as a dyeing assistant, emulsifier and wetting agent. BIO-SOFT GSB-9 contains no nonylphenol compounds giving it the potential as an NPE replacement.

Appearance at 25 °C .....	Clear to slightly hazy liquid
Actives, %.....	95 min.
pH, 1% aqueous.....	5.5-7.5
HLB.....	13.3
Pour Point, °C (°F) .....	4-6 (39-43)
Cloud Point (1% aqueous), °C (°F) .....	55-60 (131-140)
Flash Point (PMCC), °C (°F) .....	>94 (>201)
Color APHA .....	100 max.
Density at 25 °C, g/ml (lbs/U.S. gal).....	0.99
Surface Tension, 0.1% in DI Water, dynes/cm .....	26.6
Critical Micelle Concentration, mg/L (%).....	158 mg/L (0.0158%)
Draves Wetting, 0.1% in DI Water, seconds.....	7
Ross Miles, 0.1% actives, initial, cm .....	13
Ross Miles, 0.1% actives, after 5 minutes, cm .....	11
Dissolution Time at 25 °C, seconds .....	22
RVOC, U.S. EPA, %.....	5
Preservative .....	Not required

Biodegradability

The components of BIO-SOFT GSB-9 are readily biodegradable. Additional information is available upon request.

Toxicity

BIO-SOFT GSB-9 is slightly toxic orally (LD<sub>50</sub> >2,000 mg/kg). Undiluted BIO-SOFT GSB-9 is a moderate to severe skin and eye irritant while a 1% dilution generally causes slight to mild skin irritation.

Storage & Handling

Normal safety precautions (i.e., gloves and safety goggles) should be employed when handling BIO-SOFT GSB-9. Contact with eyes and prolonged contact with the skin should be avoided. Wash thoroughly after handling material.

It is recommended that BIO-SOFT GSB-9 be stored in sealed containers and kept in a cool, dry place. Avoid overheating or freezing. If material is frozen, heat and agitation are recommended to ensure the material is homogeneous before use.

**Bulk Storage Information:** BIO-SOFT GSB-9 can be stored in tanks made of 316 stainless steel, but carbon steel is adequate. An internal hairpin coil of carbon steel with low pressure steam (under 50 psig) should be used if heating is required. Mild agitation is required if tank is heated. 316 stainless steel is preferred for pumps, pipes and transfer lines, however carbon steel is adequate. Recommended storage for the material is 98-111 °F (37-44 °C).



Storage &  
Handling

Clearances

Standard Packaging: BIO-SOFT GSB-9 is available in bulk, 55 gallon drum and tote quantities.

All components of BIO-SOFT GSB-9 are listed in the following countries; United States (TSCA), Canada (DSL), Australia (AICS), China (IECSC), Korea (ECL), Japan (ENCS), New Zealand (NZIoC), and Europe (EINECS or REACH Polymer).

BIO-SOFT GSB-9 meets the U.S. EPA Safe Choice Program's surfactant screen and is listed on [www.cleangredients.org](http://www.cleangredients.org) (an on-line database for green formulators). For further information, visit [www.cleangredients.org](http://www.cleangredients.org). Additional Stepan ingredient listing can be found at [www.stepan.com](http://www.stepan.com).

**It is the responsibility of the formulator to review the chemical control regulations for each country where the end product is intended to be sold or used.**

Product  
Stewardship

This product bulletin has been written in accordance with ACC's Product Stewardship guidelines.

Additional  
Safety  
Information

A Safety Data Sheet is available upon request.



The information contained herein is based on the manufacturer's own study and the works of others and is subject to change without prior notice. The information is not intended to be all-inclusive, including as to the manner and conditions of use, handling, storage or disposal or other factors that may involve additional legal, environmental, safety or performance considerations. Nothing contained herein grants or extends a license, express or implied, in connection with any patents issued or pending of the manufacturer or others, or shall be construed as a recommendation to infringe any patents. STEPAN COMPANY MAKES NO PRODUCT WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR USE, EXPRESS OR IMPLIED, AND NO OTHER WARRANTY OR GUARANTY, EXPRESS OR IMPLIED, IS MADE, INCLUDING AS TO INFORMATION REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY, ACCURACY, COMPLETENESS, OR ADEQUACY. Stepan Company (and its employees, subsidiaries and affiliates) shall not be liable (regardless of fault) to the vendee, its employees, or any other party for any direct, indirect, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy, furnishing, use, or reliance upon information provided herein. The vendee assumes and releases Stepan Company (and its employees, subsidiaries and affiliates) from all liability, whether in tort, contract or otherwise to the fullest extent possible under the relevant law."

**Stepan**   
**Corporate Headquarters**  
**Northfield, Illinois 60093, U.S.A.**  
**Phone: 847-446-7500**  
**Fax: 874-501-2100**  
**Website: [www.stepan.com](http://www.stepan.com)**

For Technical Service Call:  
Stepan North America **+1-800-745-7837**  
Stepan Mexico **+55-11-5089-2208**  
Stepan Quimica **+55-11-5089-2200**  
Stepan Colombia **+571-636-2808**  
Stepan Europe **+33-476-505-160**  
Stepan Asia **+656-879-9855**  
Stepan Philippines **+656-879-9855**

For Customer Service Call:  
Stepan North America **+1-800-457-7673**  
Stepan Mexico **+52-555-533-1967**  
Stepan Quimica **+55-11-5089-2200**  
Stepan Colombia **+57-6-8993125**  
Stepan UK **+44-161-338-5511**  
Stepan France **+33-476-50-51-00**  
Stepan Philippines **+63-2-842-7951**