



## Product Bulletin

Product Name	<b>BIO-SOFT® LFS-04</b>
Chemical Description	Nonionic Blend
CAS Registry Number	Proprietary
Applications	BIO-SOFT LFS-04 is a high active nonionic surfactant blend that can be used in a wide variety of cleaning applications. BIO-SOFT LFS-04 is especially useful in concentrated cleaners for high dilution used on surfaces where minimal filming/streaking is desired, such as glass windows and mirrors, floors, ceramic, and vehicle windows. BIO-SOFT LFS-04 can often replace alkyl polyglucoside surfactants in cleaners due to its excellent low film/streak performance.
Typical Properties	<p>Appearance at 25 °C (77 °F) ..... Clear to slightly hazy liquid</p> <p>Actives, % ..... 90</p> <p>pH, 1% aqueous ..... 10.5</p> <p>Color, APHA ..... &lt;80</p> <p>HLB ..... 12.2</p> <p>Viscosity at 25 °C (77 °F), cps ..... 95</p> <p>Flash Point (PMCC), °C (°F) ..... &gt;94 (&gt;201)</p> <p>Cloud Point, 1% aqueous, °C (°F) ..... 46 (115)</p> <p>Freeze Point, °C (°F) ..... 18 (65)</p> <p>Density, g/mL ( lbs/ U.S. gal) ..... 1.00 (8.3)</p> <p>Surface Tension at CMC, dynes/cm ..... 27.3</p> <p>Draves Wetting, 1% aqueous, at 25 °C (77 °F), sec ..... 15.5</p> <p>Critical Micelle Concentration, mg/L ..... 13</p> <p>Ross Miles Foam, Initial, 0.1% aqueous, cm ..... 8.7</p> <p>Ross Miles Foam, 5-min, 0.1% aqueous, cm ..... 8.2</p> <p>RVOC, U.S. EPA, % ..... 0</p> <p>Preservative ..... None required</p>
Environmental Effects	BIO-SOFT LFS-04 is expected to be readily biodegradable based on the biodegradation profile of its major component(s).
Health Effects	BIO-SOFT LFS-04 is expected to be slightly toxic orally (LD50> 500 mg/kg body weight). Undiluted product is expected to be severely irritating to eye, and may causing irreversible eye damage.
Storage & Handling	<p>Normal safety precautions (e.g., gloves and safety goggles) should be employed when handling BIO-SOFT LFS-04. Avoid contact with eyes and nose, or prolonged contact with the skin. Wash thoroughly after handling.</p> <p>BIO-SOFT LFS-04 is prone to gelling when diluted in water. When diluting in water, heating may help speed dissolution of the gel that may form.</p> <p><u>Standard Packaging:</u> BIO-SOFT LFS-04 is available in drums. Please inquire if larger sizes are required.</p>



**Packaging Storage Recommendations:** BIO-SOFT LFS-04 should be stored in closed containers and kept in a cool, dry place away from incompatible materials (see Section 10 of the SDS). Product should be stored at temperatures from 20 °C (68 °F) to 50 °C (122 °F). If material is frozen it should be heated gently and stirred to ensure it is homogeneous prior to use.

Clearances

The international inventories (country clearances) of BIO-SOFT LFS-04 can be found in Section 15 of the Safety Data Sheet (SDS). **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.** If you have further questions regarding inventories, please contact North America Technical Service at [techserv@stepan.com](mailto:techserv@stepan.com).

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.



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