



Product Bulletin

Product Name	BIO-SOFT® DR-13
Chemical Description	Alcohol Ethoxylate
Applications	BIO-SOFT DR-13 is approved for use in Direct Release applications under the surfactant screen of the U.S. EPA Safer Choice Standard and is listed on CleanGredients. It meets the standards to be used in U.S. EPA Safer Choice formulations for outdoor use. As an effective degreaser, wetting agent, and solubilizer, BIO-SOFT DR-13 is the nonionic solution you should turn to when formulating an outdoor cleaner. Whether it be a car wash, boat wash, outdoor cleaner, pressure washer, etc., BIO-SOFT DR-13 is the versatile nonionic surfactant that will help meet your formulating needs.
Typical Properties	<p>Appearance at 25 °C Slightly hazy to opaque liquid</p> <p>Actives, % 100</p> <p>pH, 5% aqueous 6.5</p> <p>Color APHA..... 50 max.</p> <p>HLB..... 13</p> <p>Viscosity at 25 °C (77 °F), cps..... 135</p> <p>Viscosity at 38 °C (100 °F), cps..... 31</p> <p>Flash Point (PMCC), °C (°F)..... > 94 (> 201)</p> <p>Cloud Point (1% in Water), °C, (°F)..... 56 (132)</p> <p>Pour Point, °C, (°F)..... 13 (56)</p> <p>Density at 25 °C, g/mL (lbs/U.S. gal)..... 8.42 (1.01)</p> <p>Density at 38 °C, g/mL (lbs/U.S. gal)..... 8.45 (1.01)</p> <p>Draves Wetting at 25 °C (0.1% in Water), sec 5</p> <p>Draves Wetting at 60 °C (0.1% in Water), sec 3</p> <p>RVOC, U.S. EPA, % 0</p> <p>Preservative None required</p>
Environmental Effects	The product expected to be readily biodegradable. Additional information available upon request.
Health Effects	The product is expected to be slightly toxic orally (LD50 > 2000 mg/kg).
Storage & Handling	<p><u>Standard Packaging:</u> BIO-SOFT DR-13 is available in drums, totes, and bulk quantities.</p> <p><u>Non-Bulk Storage Recommendations:</u> BIO-SOFT DR-13 should be stored in closed containers and kept in a cool, dry place away from incompatible materials (see Section 10 of the SDS). If material is frozen, it should be heated gently and stirred to ensure it is homogeneous before use.</p> <p><u>Bulk Storage Recommendations:</u> BIO-SOFT DR-13 should be stored in vessels of 316 stainless steel or fiberglass with a corrosion liner. Heating and agitation are recommended for outside storage. Material should be stored between 80-100 °F (27-38 °C). An internal hairpin coil of 316 stainless steel with low pressure steam (under 50 psig) should be used if heating is required. Pumps, pipes and transfer lines should be 316 stainless steel.</p>



Storage &
Handling

Clearances

Normal safety precautions (e.g., gloves and safety goggles) should be employed when handling BIO-SOFT DR-13. Contact with eyes, nose, or skin should be avoided. Wash thoroughly after handling BIO-SOFT DR-13. See SDS for further information.

The international inventories (country clearances) of BIO-SOFT DR-13 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 any further questions regarding inventories, please contact North America Technical Service at 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 (SDS) is available upon request.



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