

## Product Bulletin

Product Name  
CAS Registry No.  
INCI Name  
Applications

### BIO-TERGE® AS-40 HP

68439-57-6

Sodium C<sub>14-16</sub> Olefin Sulfonate

BIO-TERGE AS-40 HP is an aqueous solution of sodium olefin sulfonate which is produced by the continuous sulfonation of alpha olefins via Stepan's falling film process. Stepan's process minimizes the formation of disulfonates thereby offering a consistent high quality product.

BIO-TERGE AS-40 HP is an ideal surfactant for a variety of detergent and personal care applications including hand soaps, shampoos, and bath products. It offers the formulator excellent viscosity and foam characteristics, as well as improved mildness over lauryl sulfates. It is more stable than alcohol sulfates over a broad pH range. BIO-TERGE AS-40 HP is preserved by excess alkalinity which allows the formulator flexibility when choosing a preservative for their finished formulation.

Typical Properties

Appearance at 25 °C	Clear liquid
Actives (MW 315), %	39.1
Unulfonated Matter, %	0.90
Sodium Chloride, %	0.40
Sodium Sulfate, %	0.78
pH, 10% aqueous	11.7
Color (Klett, 5% active)	55
Viscosity, cps at 25 °C	125
Cloud Point (as is), °C (°F)	7 (45)
Pour Point, °C (°F)	-4 (25)
Freeze Point, °C (°F)	-7 (19)
Flash Point (PMCC), °C (°F)	>94 (>201)
Boiling Point, °C (°F)	>100 (>212)
Density, g/ml (lbs/U.S. gal)	1.05 (8.79)
Critical Micelle Concentration, mg/L	301
RVOC, U.S. EPA, %	0
Preservative	Not required

Biodegradability

Product is readily biodegradable. A detailed biodegradability statement is available upon request.

Toxicity

BIO-TERGE AS-40 HP has not been tested, however, due to high alkalinity it is anticipated that the product would be corrosive to skin and eye when used "as is". BIO-TERGE AS-40 HP is slightly toxic orally (LD<sub>50</sub> = 1.3-2.4 g/kg) in rats and causes moderate skin and eye irritation at 10% active.

Storage & Handling

Normal safety precautions (i.e., the use of gloves and safety goggles) should be employed when handling BIO-TERGE AS-40 HP. Contact with the eyes and prolonged contact with the skin should be avoided. Wash thoroughly after handling material.

It is recommended that BIO-TERGE AS-40 HP be stored in sealed containers and kept at temperatures above 50 °F (10 °C). Avoid overheating or freezing. This material can gel and separate if exposed to cooler temperatures. Heat it slowly with mild agitation to insure its homogeneity before use.

Bulk Storage Information: Tanks made of 316 stainless steel or fiberglass with Atlac 382 corrosion liner are recommended. Positive displacement gear pumps and piping should be 316 stainless steel. Recommended storage for bulk tanks is 80-100 °F (27-38 °C).

Standard Packaging: BIO-TERGE AS-40 HP is available in bulk and 55 gallon drums.



Storage & Handling

Occupational exposure can occur primarily through skin contact or via inhalation of vapors and mists. Engineering controls, personal protective equipment, and other workplace practices should be used to control these exposures.

Clearances

The international inventories (country clearances) of BIO-TERGE AS-40 HP 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](mailto:techserv@stepan.com).

BIO-TERGE AS-40 HP 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).

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.



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, nor shall be construed as a recommendation to infringe any patents or to violate any applicable laws. **STEPAN COMPANY MAKES NO PRODUCT WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR USE, EXPRESS OR IMPLIED, AND NO OTHER WARRANTY OR GUARANTY OF ANY KIND, EXPRESS OR IMPLIED, IS MADE, INCLUDING WITHOUT LIMITATION REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY, ACCURACY, COMPLETENESS, ADEQUACY, OR OTHERWISE.** 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 this information, including without limitation 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**