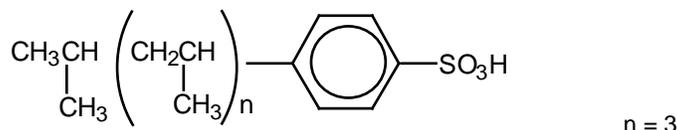


Product Bulletin

Product Name

SULFONIC 100

Chemical Structure



Chemical Description

Branched Alkylbenzene Sulfonic Acid

CAS Registry No.

68608-88-8

INCI Name

Dodecyl Benzene Sulfonic Acid

Applications

SULFONIC 100 is an economical and versatile, biodegradable surfactant intermediate. This product can be neutralized with a variety of inorganic bases and organic amines to give a wide range of sulfonates with the properties of your choice. SULFONIC 100 contains a minimum of sulfuric acid and upon neutralization produces material with little salt, light color and low odor. Both water soluble and oil soluble salts can be formed depending upon the choice of base. SULFONIC 100 is useful as a drilling foamer; it can also function as a catalyst in acid-catalyzed reactions. The salts can be in styrene butadiene rubber (SBR) latex. Amine salts can be used as acid catalysts in aqueous systems.

Neutralization Information: Temperature and pH must be controlled during neutralization of SULFONIC 100 to prevent darkening of the product and corrosion of stainless-steel equipment. The reaction temperature should not be allowed to exceed 50 °C and the pH should not go below 6.5. Approximate amounts of SULFONIC 100 and various alkalis for neutralization to make 100 lbs of active dodecylbenzene sulfonate are shown below. Actual requirements will vary with each shipment. It may be necessary to make final adjustments based on pH, adding more acid to lower the pH or more alkali to raise the pH, until the product is approximately neutral.

Neutralization of SULFONIC 100*	
Alkali	SULFONIC 100
25.2 lbs. NaOH (50%)	97.7 lbs.
37.6 lbs. KOH (45%)	93.3 lbs.
33.1 lbs. Triethanolamine (85%)	72.8 lbs.
40.0 lbs. Ammonium Hydroxide (28% NH3)	99.1 lbs.

*to obtain 100 lbs of Alkylbenzene sulfonate

Typical Properties

Appearance at 25°C.....	Clear to slightly hazy, dark brown liquid
pH, as is.....	<1
Actives (EW 326), %.....	95 min.
Pour Point, °C (°F).....	12 (54)
Freeze Point, °C (°F).....	9 (48)
Viscosity at 25 °C, cps.....	11,000
Flash Point (PMCC), °C (°F).....	>94 (>201)
Density at 38°C, g/ml (lbs/U.S. gal).....	1.03 (8.56)
RVOC, U.S. EPA, %.....	0

Environmental Effects

Product is biodegradable. A detailed biodegradation statement is available upon request.



Storage & Handling

SULFONIC 100 is a strong acid and should be handled with extreme care. Avoid contact with eyes and skin. Wash thoroughly after handling material.

Standard Packaging: SULFONIC 100 is available in drums and in bulk quantities.

It is recommended that SULFONIC 100 be stored in closed containers and kept in a cool, dry place.

Bulk Storage Information: SULFONIC 100 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.

For the purposes of offloading and packaging, the product may be heated to a maximum of 140°F (60°C). The product should not be kept at this temperature for longer than 1 week.

Clearances

The international inventories (country clearances) of SULFONIC 100 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

SULFONIC 100 is available in Kosher grade.

SULFONIC 100 is approved for use as inert ingredients under U.S. EPA 40CFR 180.910 and 180.930.

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

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**