

Product Bulletin

Product Name	STEOL® CS-460 PLUS																																				
Chemical Structure	CH ₃ (CH ₂) _n CH ₂ (OCH ₂ CH ₂) ₃ OSO ₃ Na n = 8-14 (alt. n = 10-13)																																				
CAS Registry Number	68585-34-2 (alternate CAS No. 125301-92-0)																																				
INCI Name	Sodium Laureth Sulfate (Sodium C12-15 Alketh Sulfate formerly known as “Sodium C12-15 Pareth Sulfate”)																																				
Applications	STEOL CS-460 PLUS is a biodegradable linear fatty alcohol ether sulfate. STEOL CS-460 PLUS is a high active ether sulfate that is easier to handle than regular ether sulfates due to its lower viscosity. STEOL CS-460 PLUS is mild with excellent detergent and foaming properties in hard and soft water and is compatible with other anionics, nonionics, and alkaline builders. Additional manufacturing considerations result in a low level of residual 1,4-dioxane in STEOL CS-460 PLUS. Common uses include: <ul style="list-style-type: none"> • High Foaming Cleaners • Liquid Detergents • Liquid Hand Soap • Heavy Duty Alkaline Cleaners • Emulsification • Textile Mill Kier Boiling Bleach Assistants • Souring Agents 																																				
Typical Properties	<table border="0" style="width: 100%;"> <tr> <td>Appearance at 25°C</td> <td>Clear liquid</td> </tr> <tr> <td>Actives (EW 441), %</td> <td>59.5</td> </tr> <tr> <td>1,4-Dioxane, ppm</td> <td><9</td> </tr> <tr> <td>pH, 10% aqueous</td> <td>8.3</td> </tr> <tr> <td>Color (Klett), 5% active</td> <td>30</td> </tr> <tr> <td>Unulfated Alcohol, %</td> <td>2.5</td> </tr> <tr> <td>Sodium Sulfate, %</td> <td>0.25</td> </tr> <tr> <td>Solids, %</td> <td>61</td> </tr> <tr> <td>Viscosity at 25°C, cps</td> <td>200</td> </tr> <tr> <td>Cloud Point (as is), °C (°F)</td> <td>4 (39)</td> </tr> <tr> <td>Pour Point, °C (°F)</td> <td>-1 (30)</td> </tr> <tr> <td>Boiling Point, °C (°F)</td> <td>88 (190)</td> </tr> <tr> <td>Flash Point (PMCC), °C (°F)</td> <td>25 (78)</td> </tr> <tr> <td>Freeze Point (as is), °C (°F)</td> <td>-4 (25)</td> </tr> <tr> <td>Critical Micelle Concentration (CMC), mg/L</td> <td>74</td> </tr> <tr> <td>Density, g/mL (lbs/U.S. gal.)</td> <td>1.03 (8.63)</td> </tr> <tr> <td>RVOC, U.S. EPA, % (Ethanol)</td> <td>14</td> </tr> <tr> <td>Preservative</td> <td>Not required</td> </tr> </table>	Appearance at 25°C	Clear liquid	Actives (EW 441), %	59.5	1,4-Dioxane, ppm	<9	pH, 10% aqueous	8.3	Color (Klett), 5% active	30	Unulfated Alcohol, %	2.5	Sodium Sulfate, %	0.25	Solids, %	61	Viscosity at 25°C, cps	200	Cloud Point (as is), °C (°F)	4 (39)	Pour Point, °C (°F)	-1 (30)	Boiling Point, °C (°F)	88 (190)	Flash Point (PMCC), °C (°F)	25 (78)	Freeze Point (as is), °C (°F)	-4 (25)	Critical Micelle Concentration (CMC), mg/L	74	Density, g/mL (lbs/U.S. gal.)	1.03 (8.63)	RVOC, U.S. EPA, % (Ethanol)	14	Preservative	Not required
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Environmental Effects	Product is readily biodegradable. A detailed biodegradation statement is available upon request.																																				



Health Effects

STEOL CS-460 PLUS is slightly toxic orally (LD50 > 2000 mg/kg) and causes moderate skin and eye irritation at 10% active.

Storage & Handling

Normal safety precautions (i.e., gloves and safety goggles) should be employed when handling STEOL CS-460 PLUS. Contact with eyes, nose or prolonged contact with skin should be avoided. Wash thoroughly after handling STEOL CS-460 PLUS.

Standard Packaging: STEOL CS-460 PLUS is available in bulk quantities. For other package sizes, please consult your Stepan Sales Representative.

Non-Bulk Storage Recommendations: It is recommended that STEOL CS-460 PLUS be stored in sealed containers kept in well-ventilated area away from sparks, fire, and open flame. Avoid overheating and freezing. Equipment should be grounded when transferring or using material.

Storage Recommendations: STEOL CS-460 PLUS should be stored in vessels of 316 stainless steel or fiberglass with an Atlac 382 corrosion liner, atmospheric storage with a flame arrestor, and electrically grounded fittings are recommended. Pumps, pipes and transfer lines should be 316 stainless steel.

Product must be stored below 32°C (90°F). 1,4-dioxane levels in the product may increase over time. The rate of increase is affected by time, temperature and pH. Stepan encourages customers to test the 1,4-dioxane level of their final formulations in accordance with their established testing protocols.

Workplace Exposure

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

Clearances

The international inventories (country clearances) of STEOL CS-460 PLUS 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 is available upon request.



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