



## Product Bulletin

Product Name	<b>STEOL<sup>®</sup> CA-460</b>
Chemical Structure	$\text{CH}_3(\text{CH}_2)_{10}\text{CH}_2(\text{OCH}_2\text{CH}_2)_3\text{OSO}_3\text{NH}_4$
CAS Registry Number	67762-19-0 (Alternate 32612-48-9)
INCI Name	Ammonium Laureth Sulfate
General Information	STEOL CA-460 is a biodegradable linear fatty alcohol ether sulfate. Stepan's continuous $\text{SO}_3$ process minimizes salt and free alcohol content, eliminates the presence of chlorides, permitting more consistent control of viscosity. It is a clear liquid of exceptionally light color and good odor. STEOL CA-460 is mild with excellent detergent and foaming properties in hard and soft water and is compatible with other anionics, nonionics, and alkaline builders. STEOL CA-460 is not recommended in alkaline systems since ammonia is liberated above pH 7.
Applications	STEOL CA-460 is used in high foaming dishwashing detergents and many industrial cleaners. The physical properties of this surfactant suggest many other applications such as shampoos, liquid detergents, foaming agents, emulsifiers, textile mill kier boiling bleach assistants, and neutral scouring. Foam stability in the presence of soap is much improved over other anionics, therefore STEOL CA-460 is recommended for bubble baths and cleaning products containing soap as an ingredient.
Typical Properties	Appearance at 25°C ..... Clear liquid, water white to pale yellow Actives (MW 436), % ..... 59 pH, 10% aqueous ..... 7.26 Color (Klett), 5% active ..... 35 Viscosity, cps at 25°C ..... 66 Viscosity, cps at 60°C ..... 19 Free Oil, % ..... 2.60 Alcohol Insolubles, % ..... 0.21 Pour Point, °C (°F) ..... 4 (39) Cloud Point (as is), °C (°F) ..... 6 (43) Boiling Point, °C (°F) ..... 88 (190) Flash Point (PMCC), °C (°F) ..... 28 (82) Critical Micelle Concentration, mg/L ..... 84 Density, g/ml (lbs/U.S. gal) ..... 1.01 (8.45) RVOC, U.S. EPA, % (Ethanol) ..... 14 Preservative ..... Not required
Environmental Effects	Product is biodegradable. A detailed biodegradation statement is available upon request.
Health Effects	STEOL CA-460 is practically non-toxic orally ( $\text{LD}_{50} > 4.7\text{g/kg}$ ) at 27% solution and may cause minimal to mild irritation to eyes at 2.5% solution and mild irritation to skin at 0.65% solution.

STEOL<sup>®</sup> is a registered trademark of the Stepan Company.

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Supersedes:

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Page 1 of 2



## Storage & Handling

Normal safety precautions (i.e. gloves and safety goggles) should be employed when handling STEOL CA-460. Contact with the eyes and prolonged contact with the skin should be avoided. Wash thoroughly after handling material.

It is recommended that STEOL CA-460 be stored in sealed containers and kept in a well ventilated, cool, dry area away from sparks, fire, and open flame. Avoid overheating or freezing. Equipment should be grounded when transferring or using material.

**Bulk Storage Information:** Tanks made of 316 stainless steel or fiberglass with an Atlac 382 corrosion liner, atmospheric storage with a flame arrestor, and fittings electrically grounded are recommended. Centrifugal pumps and piping should be 316 stainless steel. Recommended storage for bulk tanks is 80-90°F (26-32°C).

**Standard Packaging:** STEOL CA-460 is available in bulk and in 55 gallon drums (net weight 450 lb/204 kg).

## 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 practices should be used to control these exposures.

## Clearances

All components of STEOL CA-460 are listed in the following countries; the registration number for the active component is included in parenthesis: United States (TSCA 67762-19-0), Australia (AICS 67762-19-0), Canada (DSL 67762-19-0), China (IECSC 67762-19-0), Europe (Polymer Exempt), Japan (ENCS 7-155 and 1-391), Korea (ECL Serial No. KE-32434), New Zealand (NZIoC 67762-19-0), and Philippines (PICCS 67762-19-0).

It is the responsibility of the end user to review the chemical control regulations for each country.

STEOL CA-460 is approved for use under 40 CFR 180.910 and 40 CFR 180.930.

STEOL CA-460 is available as Kosher Certified.

## Product Stewardship

This product bulletin has been written in accordance with ACC's Product Stewardship guidelines.

## Additional Safety Information

A Material Safety Data Sheet is available upon request.

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