

CHEMGUARD S-151 High Performance Anionic Fluorosurfactant

Description

CHEMGUARD S-151 High Performance Anionic Fluorosurfactant is a partially fluorinated and alkyl sulfonic acid type fluorosurfactant. It provides surface tensions below 25 dyn/cm in water at very low concentrations.

CHEMGUARD S-151 is low foaming, and imparts enhanced wetting in highly acidic solutions, including chrome plating baths, metal pickling applications, descaling solutions, and acidic cleaning baths. It is excellent for use in the production of fluoropolymers such as in the emulsion polymerization of polyvinylidene fluoride (PVDF) and polytetrafluoroethylene (PTFE) monomers.

Features

CHEMGUARD S-151 High Performance Anionic Fluorosurfactant offers the following features:

- Delivers low surface tension at low concentrations
- Effective at wetting difficult to coat surfaces
- Superior chemical stability in acidic solutions
- Low foaming
- Provides a protective foam layer for chrome plating baths
- Low chloride content
- Low color

Typical Properties

Property	Description
Appearance	Clear liquid
Ionic Character	Anionic
Percent Actives	30 %
Diluent Composition	Water
Density 25 °C (77 °F).....	1.2 g/ml
pH.....	2.0 - 3.0
Flash Point..... (Pensky-Martens, closed cup)	> 95 °C (> 203 °F)
Freezing Point	0 °C (32 °F)
Refractive Index at 25 °C (77 °F).....	1.3370 - 1.3380
Viscosity	27.0 cP
Aqueous Surface Tension	
in Deionized Water (DI Water), 25 °C (77 °F)	
Actives.....	0.001% 0.01% 0.1%
dyn/cm (mN/m)	50 40 25

Note: Typical Properties are not for specification purposes.

Application

CHEMGUARD S-151 High Performance Anionic Fluorosurfactant is a dilute aqueous solution composed of 30% active fluorosurfactant. Typical uses include enhanced wetting in chrome plating baths, metal pickling, descaling solutions, and acidic cleaning baths.

CHEMGUARD S-151 is very effective in improving the wetting of particles and stabilizing emulsions of fluoropolymer products including PVDF and PTFE.

Recommended application rates depend on the formulation makeup, but typical levels of 0.03% to 0.05% for chrome plating baths and 0.05% to 0.20% for metal pickling and descaling are common. To determine the correct application rate level, screen several ranges of concentration to achieve the desired effect on the surface tension and wetting action.

Solubility

CHEMGUARD S-151 High Performance Anionic Fluorosurfactant is soluble in DI water and most organic solvents.

Storage and Shelf Life

Store the CHEMGUARD S-151 High Performance Anionic Fluorosurfactant between 10 °C and 50 °C (50 °F and 122 °F). If the agent is frozen or if solids separate, warm the agent to room temperature before use. The properties and performance of CHEMGUARD S-151 are not affected by freezing or thawing. Shelf life is two years if the agent is stored and tightly sealed in the original container at temperatures below 50 °C (122 °F).

Health and Safety

CHEMGUARD S-151 High Performance Anionic Fluorosurfactant is not recommended for use in applications involving repeated exposure to skin contact, inhalation, or ingestion.

CHEMGUARD fluorosurfactants are based on the telomer synthesis process and are composed of chains of six fluorinated carbons. The telomer process produces no perfluorooctane sulfonate (PFOS), and C6 materials do not break down to yield perfluorooctanoic acid (PFOA).

Refer to the safety data sheet (SDS), available at www.chemguard.com, for recommended disposal, handling, and protection information.

Note: The converted values in this document are provided for dimensional reference only and do not reflect an actual measurement.

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