

CHEMGUARD S-559-100 High Performance Nonionic Fluorosurfactant

Description

CHEMGUARD S-559-100 High Performance Nonionic Fluorosurfactant is a 100% active ethoxylated nonionic fluorosurfactant. It provides surface tensions as low as 21 dyn/cm in water at low concentrations, and is surface active in many solvents.

CHEMGUARD S-559-100 imparts enhanced wetting, spreading, leveling, and flow control properties to various types of water-based and solvent-based coating formulations. It is ideal for coating formulations designed to coat difficult substrates because of its extremely low equilibrium surface tension and excellent dynamic surface tension properties.

Features

CHEMGUARD S-559-100 High Performance Nonionic Fluorosurfactant offers the following features:

- Free from volatile organic compounds (VOC)
- Non-flammable
- Effective in both high and low pH
- Provides exceptionally low surface tension in aqueous and solvent-based products
- Improves leveling performance

Typical Properties

Property	Description
Appearance	Clear, pale yellow liquid / paste
Ionic Character	Nonionic
Percent Actives	100%
Diluent Composition	None, non-VOC
Density 25 °C (77 °F).....	1.4 g/ml
pH.....	4.5 - 7.5
Flash Point..... (Pensky-Martens, closed cup)	> 95 °C (> 203 °F)
Freezing Point	10 °C (50 °F)
Refractive Index at 25 °C (77 °F).....	1.4100 - 1.4120
Viscosity	32.0 cP
Aqueous Surface Tension in Deionized Water, 25 °C (77 °F)	
Actives.....	0.001% 0.01% 0.1%
dyn/cm (mN/m)	39 25 21

Note: Typical Properties are not for specification purposes.

Application

CHEMGUARD S-559-100 High Performance Nonionic Fluorosurfactant can improve wetting and leveling, and reduce defects such as cratering and orange peel. Typical uses include leveling and surface tension reducing agents for floor care applications, paints and coatings, inks, industrial and institutional cleaners, and oilfield operations.

The application of CHEMGUARD S-559-100 is generally employed when typical hydrocarbon surfactants are inadequate, particularly in the presence of acids, alkalies, or heat.

Recommended application rates depend on the formulation makeup, but typical levels of 0.05% to 0.30% 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-559-100 High Performance Nonionic Fluorosurfactant is soluble in water and most organic solvents.

Storage and Shelf Life

Store the CHEMGUARD S-559-100 High Performance Nonionic 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-559-100 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-559-100 High Performance Nonionic 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.

CHEMGUARD and the product names listed in this material are marks and/or registered marks. Unauthorized use is strictly prohibited.