



# DEVELOPMENT PRODUCT

## CHEMGUARD S-559-100

Nonionic Fluorosurfactant  
**FOR R&D PURPOSES ONLY**

### Product Description

CHEMGUARD S-559-100 is a 100% active short-chain perfluoro-based ethoxylated nonionic fluorosurfactant. It provides surface tensions as low as 22 dynes/cm in water at low concentrations and is also surface active in many solvents. This product has excellent dynamic surface tension properties, allowing rapid attainment of low equilibrium surface tensions. Due to its exceptional surface activity, Chemguard S-559-100 imparts excellent wetting; spreading, leveling and flow control properties to various types of water-based as well as solvent based coating formulations.

### Chemguard Fluorosurfactants

- 100% Actives Concentration
- Non-flammable
- VOC Free
- Effective at low concentrations of 50-1000 ppm, depending on the application
- Ideal replacement for Dupont \*Zonyl FSN-100
- Effective in both high and low pH
- Composed of short chain C-6 perfluoro telomer

### Typical Properties<sup>1</sup>

Appearance	Clear, pale yellow liquid/paste
Ionic Character	Nonionic
Composition	100% actives,
VOC Content	0 g/L
Flash Point	>95°C, Pensky-Martens, closed cup
Density (25°C)	1.38 g/ml
pH	5.0-7.0
Melting Point( solids)	<55°C
Odor	Mild

<sup>1</sup> Not for specification purposes.

### Solubility

Chemguard S-559-100 is soluble in water and most organic solvents. Chemguard can assist in determining solubility in any system.

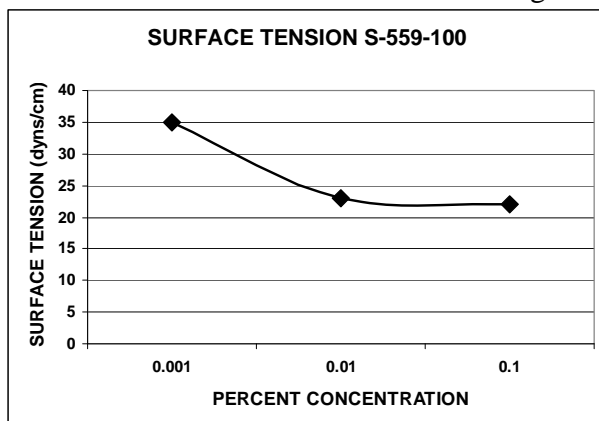
### Typical Applications

Chemguard S-559-100 can improve wetting and leveling, and reduce defects such as cratering and orange peel. Typical uses include paints and coatings, adhesives, inks, waxes, polishes, caulks, and cleaning solutions.

Fluorosurfactants such as Chemguard S-559-100 are much more chemically stable than typical hydrocarbon surfactants, particularly in the presence of acids, alkalis, or heat.

Recommended application rates depend on the formulation makeup but typical levels of 0.05% to 0.3% are common.

The charts below will aid in determining the amount of Chemguard S-559-100 that is required for a targeted level of active surfactant concentration to achieve the degree of surface tension reduction. The ideal method for determining the proper level is to screen several ranges of concentrations to achieve the desired effect on the surface tension and wetting action.



### **Storage and Shelf Life**

Chemguard S-559-100 should be stored between 10°C and 50°C. Freezing and thawing will not affect the properties or performance. Stir thoroughly before use.

Shelf life is at least one year if stored tightly sealed in the original container at temperatures below 50°C (151°F).

### **Health and Safety**

Chemguard does not recommend this product for use in applications involving repeated exposure to skin contact, inhalation, or ingestion.

Chemguard fluorosurfactants are based on telomer synthesis. No PFOS, no PFOA, and no derivatives that decompose to them are used in the manufacturing process. Chemguard S-559-100 is composed of predominately six carbon (greater than 99%) and shorter perfluoro chains that have no known pathway of decomposing to PFOS or PFOA.

Please refer to the material safety data sheet (MSDS) for recommended disposal, handling, and protection information.

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