

DuPont™ Capstone™ FS-51

FLUROSURFACTANT

TECHNICAL INFORMATION

Description

DuPont™ Capstone™ FS-51 is an amine oxide-based fluorosurfactant that significantly reduces the surface tension of aqueous solutions and is also useful in providing sustained foam. It is based on six fluorinated carbon molecules that cannot break down to PFOA in the environment.

Features

Capstone™ FS-51 enables the formation of a thin low surface tension aqueous film, which is useful for creating surface defect-free films over low surface tension or contaminated substrates. It:

- Meets the goals of the voluntary U.S. EPA 2010/15 PFOA Stewardship Program
- Targeted below LOD* for PFOA

Applications

DuPont™ Capstone™ FS-51 is recommended as a surface tension reducing and foaming agent for use in:

- oilfield operations
- industrial and institutional cleaning
- floor care products
- car care products

Physical Characteristics

Appearance	Clear amber-colored liquid
Chemical structure	Perfluoroalkyl amine oxide
Active ingredient, wt%	40
Solvent	Ethanol/water
Density at 20°C (68°F)	1.07
Thermal stability	Stable up to 175°C (347°F)
pH	6–8
Flash point (closed cup)	25°C (77°F)
Solubility at 25°C (77°F)	Soluble in water, ethanol and ethylene glycol

* Below the limit of detection (LOD) based on the published analytical method found in *The Journal of Chromatography A*, 1110 (2006) 117–124.



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Surface Tension at 25°C (77°F) in DI Water (mN/m)

0.01% (A.I.)	0.05% (A.I.)	0.1% (A.I.)
19.0	15.5	15.4

Ross-Miles Foaming Data

Capstone™ FS-51 (0.05% A.I.)	mL of Foam After		
	30 sec	3 min	5 min
Deionized water	350	340	340
10% NaCl in distilled water	120	120	120

Personal Safety, First Aid, Storage, and Handling

Like any other chemical product, fluorinated surfactants must be handled and used with care (any contact with skin and eyes is to be avoided). Please refer to the Material Safety Data Sheet (MSDS) for product specific information. Mix well before using. Warm the product to room temperature before use after cold storage.

DuPont Chemical Solutions Enterprise

Customer Service Center

Barley Mill Plaza, Bldg. 23
Wilmington, DE 19898
866-828-7009

www.capstone.dupont.com

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