

DuPont™ Capstone™ FS-10

FLUORINATED SURFACTANT

TECHNICAL INFORMATION

Description

Capstone™ FS-10 is an anionic fluorinated surfactant that reduces the surface tension of aqueous solutions to very low levels. It is based on six fluorinated carbon molecules that cannot break down to PFOA in the environment.

Features

Capstone™ FS-10 demonstrates exceptional chemical stability in corrosive media and, in particular, very acidic solutions. It also:

- Is a low-foaming agent
- Imparts additional properties that may prove useful in formulations based on aggressive (highly acidic, oxidizing, or reducing) media
- Meets the goals of the voluntary U.S. EPA 2010/15 PFOA Stewardship Program
- Targeted below LOD* for PFOA

Applications

Capstone™ FS-10 is used as an antistat in films.

- **Chrome plating baths:** aids wetting of the components to be treated and promotes the formation of a foam layer on the surface of the bath, preventing dangerous chromic acid fume generation.
- **Emulsification:** for the polymerization of fluorinated monomers such as PVDF and PTFE and emulsification of fluoropolymer powder.
- **Metal treatment:** cleaning, descaling, and pickling. Because of its wetting properties and stability in highly aggressive media, Capstone™ FS-10 reduces treatment time, improves surface quality and reduces bath dragout.

Product Specifications

Appearance	Clear liquid
Chemical structure	Perfluoroalkylsulfonic acid
Active matter, wt%	30
Solvent	Water
pH of a 1 wt% solution	2.2

Physical Properties

Solubility at ambient temperature	
Water	Highly Soluble
Sulfuric acid 50%	Partly Soluble
Hydrochloric acid 19%	Partly Soluble
Nitric acid 50%	Highly Soluble
Acetone	Highly Soluble
Density at 20°C (68°F)	1.15

Surface Tension at 25°C (77°F)

Water		Aqueous Nitric Acid 30%	
Amount on Active Ingredient Basis		Amount on Active Ingredient Basis	
0.01%	48.5 mN/m	0.01%	33.0 mN/m
0.1%	23.5 mN/m	0.1%	16.5 mN/m
0.2%	20.0 mN/m	0.2%	15.5 mN/m

Availability

4 oz sample, 100 lb and 2,204 lb containers.

Storage and Handling

See the Material Safety Data Sheet (MSDS) for product specific information.

* 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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DuPont™ Capstone™ FS-10

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