DuPont™ Capstone® Fluorosurfactant FS-10

TECHNICAL INFORMATION

Description

FS-10 is an anionic fluorinated surfactant that reduces the surface tension of aqueous solutions to very low levels. 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

Applications

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, providing acid mist suppression properties.
- **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, FS-10 reduces treatment time, improves surface quality and reduces bath dragout.

Typical Properties

Appearance	Clear to yellow liquid
Chemical structure	Halogenated aliphatic acid
Composition	30% solids in water
pH of a 1 wt% solution	2.2
Ionic character	Anionic
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
Stability	Freeze-thaw stable. Mix well before use.
Shelf Life	5 years

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 dynes/cm	0.01%	33.0 dynes/cm
0.1%	23.5 dynes/cm	0.1%	16.5 dynes/cm
0.2%	20.0 dynes/cm	0.2%	15.5 dynes/cm

Storage and Handling

See the material Safety Data Sheet (SDS) for product-specific information.

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DuPont™ Capstone® Fluorosurfactant FS-10

DuPont™ Capstone® Repellents and Surfactants

- Deliver more sustainable solutions with maximum performance
- Are short-chain molecules that cannot break down to PFOA in the environment
- Are supported by an in-depth foundation of data
- Are in compliance with REACH requirements
- Are listed on TSCA inventory
- Meet the goals of the U.S. Environmental Protection Agency 2010/15 PFOA Stewardship Program

For questions regarding technical data, commercialization, and sampling:

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H-97562-3 (05/12) Printed in the U.S.A.

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