

DuPont™ Capstone® Fluoropolymer FS-83

TECHNICAL INFORMATION

Description

FS-83 is a solvent-borne additive that provides low surface tension in solvent-based paints. It is compatible with most organic solvent-based systems. The low surface tension enables better wetting, spreading, leveling to correct solvent-borne coating defects, such as fisheyes, craters, pinholes and orange peel. When cured into a coating, it provides water and oil repellency, as well as chemical resistance, to the film.

Even at very low use rates, FS-83 can deliver excellent repellency to the film, which can be measured by water and hexadecane contact angle. The typical use rate of FS-83 for most coating applications is from 0.02% to 0.1% on an active ingredient (a.i.) basis. For solvent-based paints, the typical use rate is 0.05%.

Applications

Paints and Coatings

- Improved wetting and leveling to eliminate craters, pinholes, fisheyes and orange peel
- Improved water and oil repellency of dried film
- Compatible with wide range of solvent-based paints, such as alkyd, 1K and 2K polyurethane

Waxes and Varnishes

- Improved wetting and enhanced leveling
- Reduced cratering and other coating defects
- Increased surface water and oil repellency
- Compatible with many solvent-based waxes and polishes

Fluoropolymer and PTFE dispersion

- Improved dispersion stability

Typical Properties

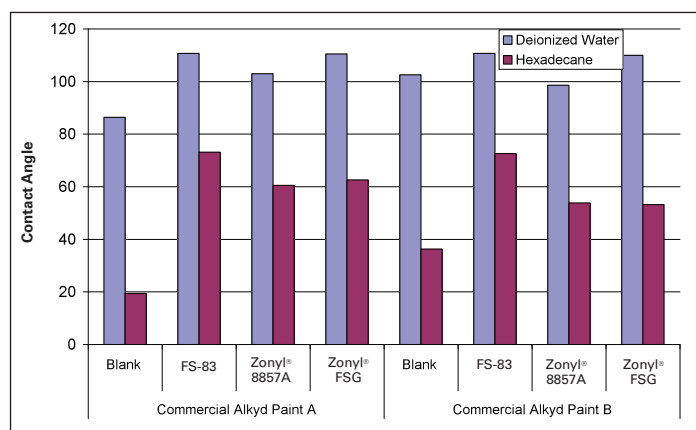
Appearance	Light yellow liquid
Composition	35% solids in Butyl Acetate (BuOAc)
Structure	Partially fluorinated acrylic copolymer
Ionic Character	Nonionic
Specific Gravity	0.97
Flash Point	28 °C
Stability	Product gels below 10 °C (50 °F), warming up the product to 25°C will reverse the gelling. The product is freeze-thaw stable. Mix well before use.
Solubility	>5% in isopar-H, mineral spirits, butyl acetate, n-heptane
Shelf Life	5 years

Performance

Surface Tension (dynes/cm at 25 °C)

% Actives	MIBK	IPA	BuAc	Xylene
0	23.9	21.6	25.1	25.6
0.05	22.4	20.7	23.3	21.7
0.1	22.9	20.7	22.9	21.1

Water and oil contact angles in commercially available paints Advancing Water and Hexadecane Contact Angles



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DuPont™ Capstone® Fluoropolymer FS-83

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
- 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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