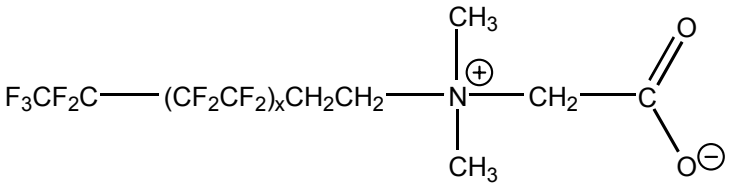
Masurf® FS-330



Fluoroaliphatic Betaine Fluorosurfactant

Overview

MASURF® FS-330 is characterized as a 30% active fluoroaliphatic betaine fluorosurfactant in a water/isopropanol solution. With typical use levels of 50-500ppm, MASURF FS-330 is effective at very low concentrations, and together with traditional hydrocarbon surfactants, can contribute properties not possible with either material alone.

MASURF FS-330 is a very effective at reducing surface tension, in aqueous acids, bases and polar solvents. FS-330 is high foaming amphoteric fluorosurfactant with high hard water tolerance, contributing exceptional foaming, wetting, spreading and leveling properties to a wide range of systems.

As an amphoteric surfactant, FS-330 exhibits high electrolyte tolerance when used in **Alkaline Cleaners**, and in **Mining Operations** such as flotation, wetting, penetration and leaching. With high surface activity at low concentrations, when used in **Photographic emulsions, Coatings** and **Polishes**, FS-330 provides exceptional surface wetting and leveling for high gloss and durability.

Compare to Fluorad® FC-100, Zonyl® FSK and Lodyne® S-100.

Typical Properties

Physical form	Light yellow liquid, with mild alcohol odor
Actives content %	30.0±1.0 wt%
Aqueous surface tension @25°C dynes/cm	32@ 0.001%, ≤18@ 0.01%, ≤1.5@ 0.01%
Interfacial tension (0.1%aq./cyclohexane)	9 dynes/cm
Specific gravity @25°C	1.05±0.10
pH	4.0±1.0
Viscosity @25°C	<100 cps
Flash point (TCC)	28°C
VOC content (volatile-water)	30% (Isopropanol)
Storage	Store above 32°F and below 100°F

Handling Information

Refer to the Material Safety Data Sheet (MSDS) available from Mason Chemical Company for information on the safe use, handling and disposal of this product.

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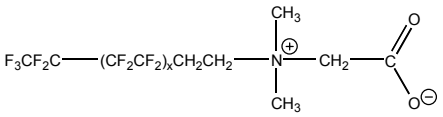

MASURF FS-330 is a 30% active fluoroaliphatic betaine fluorosurfactant in a water/isopropanol solution. FS-330 is an effective wetting and interfacial tension reducing agent. The formulation below illustrates this effect.

Furniture Polish

Ingredients:	**Wt.%**
Water	to 100.0
T-Maz-80[(1)]	0.03
S-Maz-80[(1)]	0.9
Ethomeen 18/60[(4)]	0.15
Masurf FS-330	0.05
Carbopol ETD-2050[(2)]	0.05
Drakesol 165 Oil[(3)]	3.0
Masil SF-500[(1)]	2.0
Potassium hydroxide, 45%	0.07
Fragrance	q.s.
Preservative	q.s.

Procedure:

- Add T-Maz-80, S-Maz-80, Ethomeen 18/60 and Masurf FS-330 to water with mild agitation. Sift in Carbopol ETD-2050. Mix until uniform.
- Combine Drakesol 165 and Masil SF-500 then add to water/emulsifier mixture with agitation.
- Slowly add diluted KOH, 45% to activate thickener.
- Add Fragrance and Preservative.

(1) BASF Corporation
(2) BF Goodrich Company
(3) Penreco
(4) Akzo

MASURF FS-330 Furniture Polish is a low cost, stable, single vessel formulation that does not require homogenization. The addition of very small amounts of MASURF FS-330 significantly improves the gloss and rub-out performance of this formula. MASURF FS-330 is very efficient and effective at lowering interfacial tension to change microemulsion performance characteristics in this formula and others.

Masurf FS-Fluorosurfactant evaluation guidelines-
Masurf FS-Fluorosurfactants are effective at very low concentrations, typically 50-500 ppm, and can act synergistically with hydrocarbon and/or silicone surfactants. Evaluate in aqueous formulations at 0.1% active Masurf FS-Fluorosurfactant initially, then optimize by successively reducing the FS concentration by ½.

Masurf FS-Fluorosurfactants and Masurf FP-Fluoropolymers do not contain PFOS. Masurf FS and FP products are manufactured with telomerization process fluoroaliphatic intermediates that do not contain, release or have been shown to degrade to perfluorooctane sulfonate (PFOS).

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