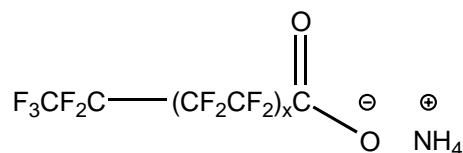


Masurf[®] FS-1030



Fluoroaliphatic Ammonium Carboxylate Fluorosurfactant

Overview

MASURF FS-1030 is characterized as a 30% active fluoroaliphatic ammonium carboxylate fluorosurfactant in a water/isopropanol solution. With typical use levels of 50-500ppm, MASURF FS-1030 is effective at very low concentrations, and together with traditional hydrocarbon surfactants, can contribute properties not possible with either material alone.

MASURF FS-1030 is a superior surface tension and interfacial tension reduction agent for wetting and leveling performance unobtainable with other fluorinated or traditional alkyl surfactants. FS-1030 exhibits exceptional surface activity in acidic and oxidizing systems, with excellent water solubility. FS-1030 is stable in anionic and nonionic systems, and effective in high or low pH.

When formulated into **Cleaning Products**, FS-1030 imparts exceptional wetting and leveling for penetrating cleaners/strippers and uniform drying properties for non-streak cleaners, and provides superior wetting and surface tension reduction for **Carpet and Upholstery Cleaners**. Use MASURF FS-1030 as a leveling and coalescent aid in aqueous **Floor Finishes, Coatings and Sealers**, and to enhance recoat performance.

Typical Properties

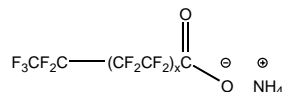
Physical form	Light yellow liquid with mild odor
Actives content %	29.5 wt% minimum
Aqueous surface tension @25°C dynes/cm	66.2@0.001%, 18.6@0.01%, 15.1 lowest
Interfacial tension (0.1%aq./cyclohexane)	10.5 dynes/cm
Specific gravity @25°C.....	1.08±0.04
pH	10.5±1.5
Viscosity @25°C.....	<100 cps
Flash point (TCC)	18°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-1030 is a 30% active fluoroaliphatic ammonium carboxylate fluorosurfactant in a water/isopropanol solution. FS-1030 is an effective wetting and interfacial tension reducing agent. The formulation below illustrates this effect.

Concentrated Oven & Grill Cleaner

Ingredients:	Wt. %
Water.....	77.9
Monoethanolamine.....	20.0
Carboxymethyl cellulose	1.5
Glucopon 425N ⁽¹⁾	1.5
Masurf FS-1030	0.1

Procedure:

Mix ingredients in order listed.
Use "as is."

(1) Cognis Corporation

When formulating Hard Surface cleaners, the acronym "TACT" should be kept in mind: T (Time), A (Agitation), C (Concentration) and T (Temperature). Leverage any component of TACT for improved cleaning performance and efficiency. MASURF FS-1030 is effective at reducing the required contact time (T) by increasing wetting performance and penetration, and increasing the effective concentration (C) by lowering the interfacial tension between the detergent surfactants, monoethanolamine and soil.

Oven & Grill surfaces become encrusted with an impenetrable char of burned-on organic deposits of fats, oils and particulate food deposits. MASURF FS-1030 was found to improve the efficiency of the formulation through faster softening and loosening of the oven & grill deposits for easy removal.

Drain Cleaner

Ingredients:	Wt. %
Water.....	69.4
Carboxymethyl cellulose ⁽¹⁾	2.0
Glycol ether solvent ⁽²⁾	10.0
Sodium Thioglycolate ⁽³⁾	1.5
Masurf FS-1030	0.1
Sodium Chloride ⁽⁴⁾	15.0

Procedure:

Mix ingredients in order listed.
Use "as is."

- (1) Thickener to limit rapid dilution in standing water
- (2) Water soluble solvent to aid in grease and soap scum softening
- (3) Depilatory for decomposing hair and proteins
- (4) Densifier for pouring through standing water

The performance enhancements that MASURF FS-1030 can bring to a formulation can allow a formulator the use of less hazardous ingredients without sacrificing performance. MASURF FS-1030 is very efficient and effective at increasing wetting performance and penetration, and increasing the efficiency of cleaning ingredients by lowering the interfacial tension between the cleaning ingredients and target soil.

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).