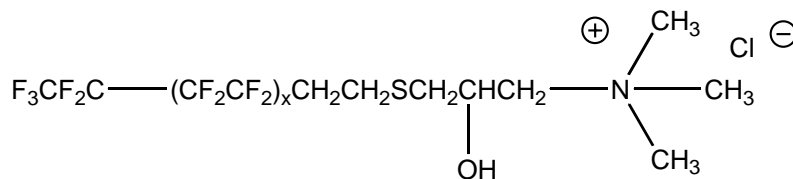


Masurf[®] FS-1620



Fluoroaliphatic Quaternary Ammonium Fluorosurfactant

Overview

MASURF FS-1620 is characterized as a 20% active fluoroaliphatic quaternary ammonium fluorosurfactant in an aqueous solution. With typical use levels of 50-500ppm, MASURF FS-1620 is effective at very low concentrations, and together with traditional hydrocarbon surfactants, can contribute properties not possible with either material alone.

As a cationic surfactant, MASURF FS-1620 is a superior surface tension and interfacial tension reduction agent with substantive surface properties similar to alkyl quaternaries. Use FS-1620 in **Personal Care** products, **Specialty Cleaners and Conditioners**, **Deodorizers**, and **Surface Treatment** applications for improved wetting performance with unique residual surface modification and protection.

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INCI Name: C4-18 Perfluoroalkylethyl Thiohydroxypropyltrimonium Chloride

Typical Properties

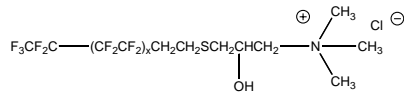
Physical form Light yellow liquid, w/mild odor
Actives content % 19 wt% minimum
Aqueous surface tension @25°C dynes/cm 30.5@0.001%, 22.0@0.1%, 21.0 lowest
Interfacial tension (0.1%aq./cyclohexane) 10.2 dynes/cm
Specific gravity @25°C 1.06±0.04
pH 6.0±1.5
Viscosity @25°C <100 cps
Boiling point 100°C
Storage 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-1620 is a 20% active fluoroaliphatic quaternary ammonium fluorosurfactant in an aqueous solution. FS-1620 is an effective wetting and interfacial tension reducing agent. The formulation below illustrates this effect.

Hair Conditioner

Ingredients:	Wt. %
Water.....	to 100.0
Maquat CETAC-30% ⁽¹⁾	3.0
Cetyl alcohol.....	3.0
Stearyl alcohol.....	1.0
Ceteareth-20.....	0.5
Masurf FS-1620	0.015
Fragrance.....	q.s
Preservative.....	q.s.

Procedure:

- Mix water and CETAC-30%, heat to 65°C.
- Add Cetyl/Stearyl alcohols, and Ceteareth-20, heat to 75°C and hold for 30 minutes.
- Cool to 45°C, add Masurf FS-1620, Fragrance and Preservative.

(1) Cetrimonium chloride

Damaged hair, especially permed hair can be difficult to comb, especially when wet. Hair Conditioner products are generally oil-in-water emulsions in which the lipophilic conditioning quat is the active ingredient. The conditioning quat, along with the fatty alcohols impart wet-comb performance to the formulation. The addition of very small amounts of MASURF FS-1620 significantly improves wet comb performance of this formula, and others of its type, especially on damaged hair.

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/PFOA. 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) or perfluorooctanoic acid (PFOA).

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