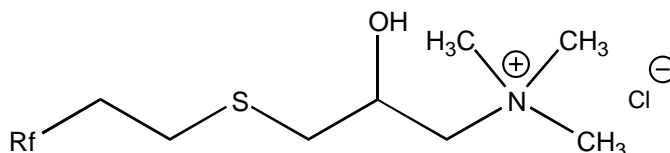


NEW PERSONAL CARE ACTIVE FOR 2006

Masurf[®] FQ20



Multifunctional, Patent-Pending, Antimicrobial Enhancer, Skin and Hair Conditioning Agent for Personal Care

Overview

MASURF FQ20 is characterized as a 20% active fluoroaliphatic quaternary ammonium fluorosurfactant in an aqueous solution. With typical use levels of 50-500ppm, MASURF FQ20 is an effective fast acting antimicrobial active, effective skin and hair conditioning agent and can achieve self-preserving formulations at very low concentrations.

Multifunctional Surfactant, Wetting Agent, Skin and Hair Conditioning Agent, Fast acting Antimicrobial, Quality Control Agent for Resistant and problem Organisms

As a cationic surfactant, MASURF FQ20 is a superior surface tension and interfacial tension reduction agent with substantive surface properties similar to alkyl quaternaries. Use FQ20 in **Personal Care** products, **Specialty Cleaners and Conditioners**, **Deodorizers**, and **Surface Treatment** applications for improved wetting performance with unique residual surface modification and protection.

INCI Name: C4-18 Perfluoroalkylethyl Thiohydroxypropyl-trimonium Chloride,
CAS# 70983-60-7, EINECS# 275-091-5

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.

Masurf is a Registered Trademark of Mason Chemical Company.

Masurf[®] FQ20

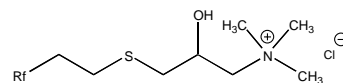


Table 1. Minimum Inhibitory Concentration (MIC) for Masurf FQ20 After 24 Hours

	Active levels					
	2% (4000ppm)	1% (2000ppm)	0.5% (1000ppm)	0.25% (500ppm)	0.125% (250ppm)	0.063% (125ppm)
Organism						
E. coli	NG	NG	NG	NG	NG	NG
S. aureus	NG	NG	NG	NG	NG	NG
P. aeruginosa	NG	NG	NG	NG	NG	NG
C. albicans	NG	NG	NG	NG	NG	NG
A. niger	NG	NG	NG	NG	NG	NG

NG= No Growth, G= Growth

Masurf FQ20 is a 20% active fluoroaliphatic quaternary ammonium fluorosurfactant in an aqueous solution. FQ20 is an effective wetting and interfacial tension reducing agent. The formulation below illustrates this effect.

Self Preserving 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 FQ20.....	0.1
Fragrance.....	q.s.

(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 FQ20 significantly improves wet comb performance of this formula, and others of its type, especially on damaged hair. Plus with the antimicrobial activity of the FQ20 no preservative may be needed. Challenge screening should always be done because of differences in formulation.

US TOXIC SUBSTANCES CONTROL ACT/INVENTORY STATUS

Complies with the requirements of the following chemical inventories: US (TSCA), Canada (DSL), Korea (ECL), ASIA-PAC.

Toxicological Information

Oral LD ₅₀ (rat).....	>2500mg/kg
Primary Skin irritation (rabbit).....	Moderate irritant
Primary Eye irritation (rabbit).....	Moderate irritant
Genetic Studies (Ames).....	Negative

Masurf FQ-Fluorosurfactants, 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).