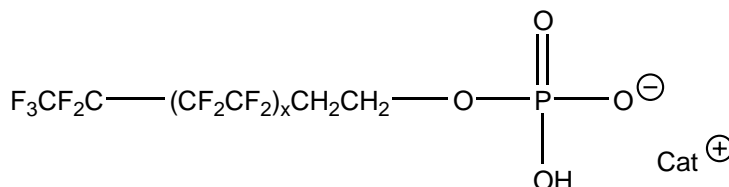


# Masurf<sup>®</sup> FS-130A



## Fluoroaliphatic Phosphate Ester Fluorosurfactant

### Overview

MASURF FS-130A is characterized as a 30% active fluoroaliphatic phosphate ester fluorosurfactant in an aqueous solution. FS-130A contributes exceptional oil resistance, rheology and surface modification, spreading and leveling properties to a wide range of systems. MASURF FS-130A is an ammonium salt, which is often preferred to DEA salts when formulated into aqueous products.

In **Personal Care** products, MASURF FS-130A adds unique conditioning, wetting, lubricity and oil/sebum resistance properties. When incorporated into **Make-Up and Mascara**, FS-130A contributes to a “water-and sweat-proof top coat keeps the finish smudge-free and color vibrant all day long.” In **Make-Up Foundation**, FS-130A treated pigments provide a “barrier between sebum and pigments to insure that color stays fresh and true, with no darkening of pigments.” In **Shampoos and Conditioners**, as little as 0.5-1.0% FS-130A can significantly retard or delay the recurrence of oily appearance of hair.

**INCI Name: Ammonium C6-16 Perfluoroalkylethyl Phosphate**

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).

### Typical Properties

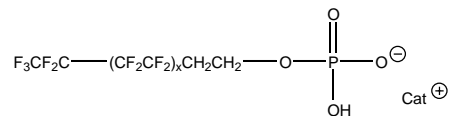
Physical form .....	Tan dispersion, with mild ammonia odor
Actives content % .....	27 wt% minimum
Aqueous surface tension @25°C dynes/cm .....	50.5@0.001%, 37.4@0.01%, 37.4 lowest
Specific gravity @25°C.....	1.14±0.04
pH .....	10.0±1.5
Viscosity @25°C.....	<1000 cps
Flash point .....	None
VOC content (volatile-water) .....	0
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.

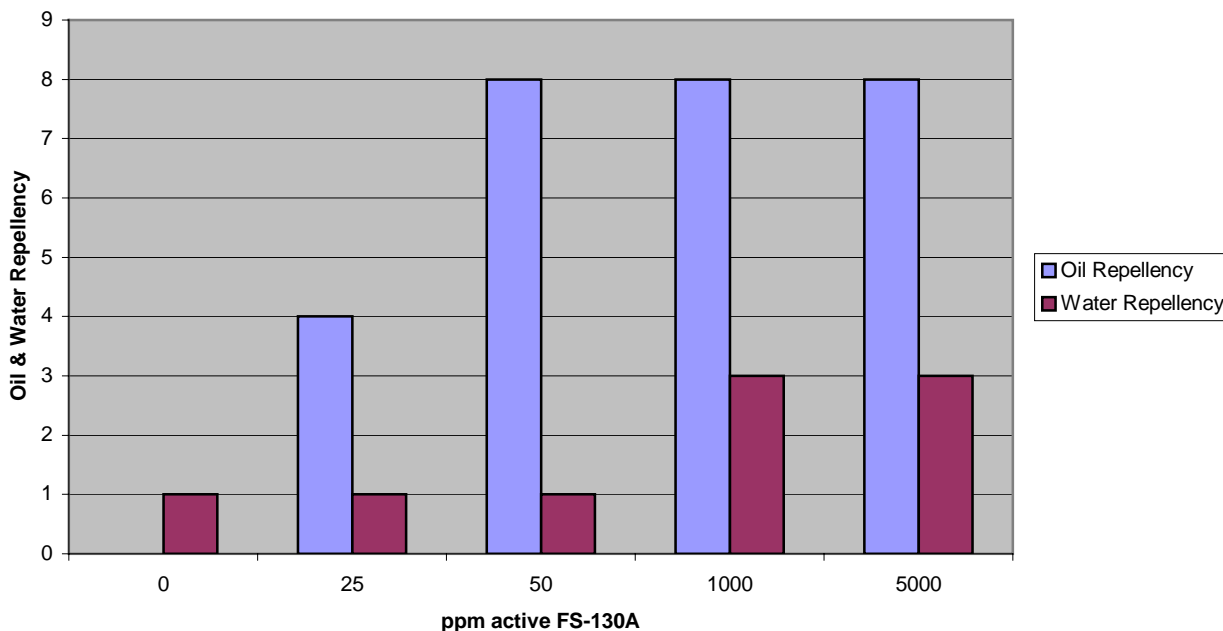
*Masurf is a Registered Trademark of Mason Chemical Company.*

# Masurf<sup>®</sup> FS-130A



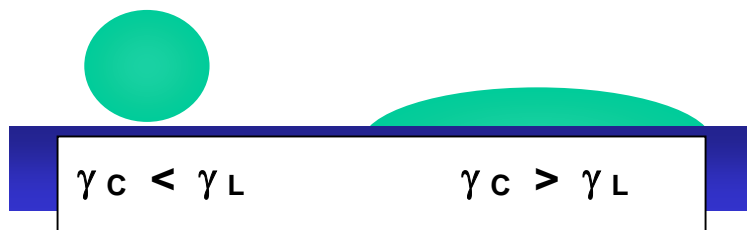
MASURF FS-130A is a 30% active ammonium fluoroaliphatic phosphate ester fluorosurfactant in an aqueous solution. When formulated into aqueous **Film Forming Products**, as little as 25-50ppm active FS-130A imparts demonstrable oil and grease resistance:

Masurf FS-130A Fluid Resistance



The addition of 0.008-0.016% (25-50ppm active) MASURF FS-130A imparted demonstrable Oil Resistance to this acrylic polymer formulation. Hydrocarbons of increasing solvent strength, from Paraffin liquid "Kaydol" to n-Heptane beaded and rolled-off the FS-130A containing Finish treated vinyl composition tile. The Finish formulation without FS-130A allowed the lowest solvent strength to wet the tile.

Masurf FS-130A was added to a 20%NV styrene/acrylic emulsion. Oil & Water Repellency was evaluated after application of 3 coats of approximately 1g/sq.ft. emulsion solids to pre-cleaned vinyl squares. Oil Repellency: Modified AATCC Method 118-1997; 1=Paraffin liquid (Surface Tension 31.5mN/m), 8=n-Heptane (19.8mN/m), Water Repellency: Modified 3M Test Method; 1=Water (Surface Tension 72.3mN/m), 2=90/10 Water/IPA (41mN/m), 3=80/20 Water/IPA (32.3mN/m), 11=IPA (22.6mN/m).



Where  $\gamma_L$  = Surface Tension of Liquid,  
 $\gamma_S$  = Surface Tension of Solid  
 $\gamma_C$  = Critical Surface Tension ( $\gamma_S = \gamma_L$ )

By lowering the Critical Surface Tension of a surface or film, MASURF FS-130A can contribute Oil & Grease Resistance to a range of products.

## Masurf FS-130A Fluorosurfactant dilution and mixing guidelines-

To facilitate addition and ensure adequate mixing, it is normal practice with fluoroaliphatic surfactants to add them to the system as a dilute stock solution. For clear, stable 3% active solutions: combine with gentle agitation 10% Masurf FS-130A with 3% Isopropanol and 3% Ethylene glycol monobutyl ether, warm to 45°C, then q.s. to 100% with water.