

## Why Fluorosurfactants?

*Fluorosurfactants, on a weight basis, are more expensive than hydrocarbon or silicone-based surfactants.*

*What are the reasons for choosing fluorosurfactants in an application??*

You use less. Usually, 5-10x less. So, fluorosurfactants can be very cost effective. And leave less residue.

They have unparalleled wetting power. Surface tensions as low as 16 dyn/cm are not uncommon -- and not possible with silicone or hydrocarbon surfactants.

They are able to function in harsh chemical and thermal environments. Acids, oxidizing agents, strong alkali

They function in solvent systems. Ordinary surfactants are not surface-active in organic solvents.

## Why Fluorosurfactants?

- Fluorosurfactants partner well with hydrocarbon and silicone surfactants. In general, hydrocarbon surfactants tend to operate well at condensed phase interfaces, and fluorosurfactants aggregate at air interfaces; Synergy has been observed in many systems.
- Because you use so little, Ionic Fluorosurfactants can be used across a wide pH range. (Those having a positively or negatively-charged ‘head group’) This is seldom possible with hydrocarbon surfactants, due to compatibility problems.
- Fluorosurfactants can be mixed. Anionic with cationic. The results are truly astounding in terms of surface tension reduction at exceedingly low concentrations. They can be mixed with hydrocarbon surfactants, too.
- Fluorosurfactants tend not to interfere with hydrocarbon-based emulsions, dispersants, or organic pigment formulations. This allows you to formulate to increase wetting power without disrupting a carefully-balanced system.

## Cost Effectiveness of Fluorosurfactants

### Hydrocarbon Surfactant

2% @ \$2.00 / lb in 100 lbs product.

Cost = \$0.04 of Surfactant / lb of product

### Fluorosurfactant

150 ppm @ \$25 / lb in 100 lbs product

Cost = \$0.004 of Fluorosurfactant / lb of product