

Technical Bulletin

SURFONIC® LF-17 Surfactant

PRODUCT DESCRIPTION

SURFONIC® LF-17 surfactant is an ethoxylated and propoxylated linear primary 12-14 carbon number alcohol. The low-foaming and good surface active properties of SURFONIC® LF-17 surfactant suggest its use in any application where foam control is necessary.

APPLICATIONS

- Mechanical dishwashing
- Laundry detergents
- Pulp and paper processing
- Metal cleaning

SALES SPECIFICATIONS

<u>Property</u>	<u>Specifications</u>	<u>Test Method*</u>
Appearance, 25°C	Not more than a trace of turbidity	ST-30.1
Cloud point, 1% aqueous, °C	32 - 36	ST-9.1, 5.2.1
Color, Pt-Co	100 max.	ST-30.12
pH, 1% solution	5.0 - 7.5	ST-31.36,C
Water, wt%	0.5 max.	ST-31.53,5

*Methods of Test are available upon request.

TYPICAL PROPERTIES

Regulatory Information

See SDS for all regulatory information.

Physical Properties

Flash point, COC, °F/°C	295/146
Pour point, °F/°C	10/-12
Density, g/ml at 25°C (77°F)	0.9980
Weight, lbs/US gal at 25°C (77°F)	8.30
Viscosity, kinematic	
cSt at 15.6°C (60°F)	156
cSt at 25°C (77°F)	96

Performance Properties

Draves Wetting Time, seconds		
0.1% solution at 25°C		
1.5 gram hook		13.7
3.0 gram hook		7.2
Foam height, mm, Ross-Miles test		
0.1% solution at 120°F		
initial		6.0
5 minutes		0.0
Surface tension, dynes/cm,		
25°C, 0.1% solution		33.0
25°C, 0.001% solution		38.4

TOXICITY AND SAFETY

For information on the toxicity and safe handling of this product, please read the Safety Data Sheet prior to use of the product.

HANDLING AND STORAGE

SURFONIC® LF-17 surfactant may be satisfactorily stored in carbon steel tanks using steel pipes and pumps. Caution must be exercised, however, to keep the material in the anhydrous state to prevent severe corrosion to the carbon steel tank and related equipment. A drier on the breathing nozzle is recommended to help maintain anhydrous conditions in the storage tank.

For longer term color stability, it is recommended that the product be stored under an inert atmosphere. Solid sediment may form upon standing. There should be circulation in the storage vessel to keep solids suspended.

Low pressure steam coils in storage tanks and steam tracing of transfer lines should be provided in cases where low environmental temperatures may make pumping of the product difficult.

SHIPPING DATA

Product is available in tank cars, tank trucks and drums of 440 pounds (199 kilograms) net weight. Small samples can be obtained by contacting any Indorama Ventures sales office.

BIODEGRADABILITY AND ENVIRONMENTAL SAFETY

The SURFONIC® LF-series products are considered to be biodegradable; however, the rate of biodegradation is retarded because of the polyoxypropylene chain in the products. Removal of organic carbon reached 40% after 71-85 days in a laboratory activated sludge study.

The SURFONIC® LF surfactants are expected to exhibit aquatic toxicity similar to or less than that of alcohol ethoxylates. Study of a low foam surfactant similar to SURFONIC® LF-17 surfactant shows it to be much less toxic to aquatic life than alcohol ethoxylates (water flea, LC₅₀, 72 ppm; fathead minnow, LC₅₀, 13 ppm).

General References

1. Journal of the American Oil Chemists' Society, Volume 65, No. 10, p. 1669 (1988).
2. Talmage, S. S., Environmental and Human Safety of Major Surfactants: Alcohol Ethoxylates and Alkylphenol Ethoxylates, a report to the Soap and Detergent Association, Lewis Publishers, 1994.

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