



DeIONIC LF-EP Series

DeIONIC LF-EP surfactants are low-to-moderate foaming, nonionic alkoxyated alcohols with cloud points in water ranging from ~15°C to ~61°C.

Specifications

	DeIONIC LF-EP-15	DeIONIC LF-EP-25	DeIONIC LF-EP-40	DeIONIC LF-EP-61
Cloud Point*	13° - 18°C	23° - 27°C	38° - 42°C	56° - 63°C
Appearance, 25°C	All products: Almost colorless, clear to hazy liquids.			
pH, 5% in DI water	All products: pH range 5.0 – 9.0.			
Color, Gardner	All products: 1 max.			
% Moisture	All products: 1.0% max.			

*1% by weight in DI water

Solubility & Typical Properties

	DeIONIC LF-EP-15	DeIONIC LF-EP-25	DeIONIC LF-EP-40	DeIONIC LF-EP-61
Water	soluble up to ~15°C	soluble up to ~25°C	soluble up to ~40°C	soluble up to ~61°C
Alcohols	soluble	soluble	soluble	soluble
Glycols	soluble	soluble	soluble	soluble
Solvents	soluble	soluble	soluble	insoluble
Oils	insoluble	insoluble	insoluble	insoluble
Foam Profile	very low	low – moderate	moderate-fast breaking	moderate
% Activity	All products: 99% min.			
Density @ 25°C	~0.98 g/ml	~0.99 g/ml	~1.01 g/ml	~1.01 g/ml
HLB (calculated)	~6	~7	~8.5	~11.7
VOC*		4.6 grams/liter		

*ASTM E1868-10 / SCAQMD RULE 1144

Additional Properties

- All products are acid and alkaline stable and will contribute fast wetting properties, detergency, and surface tension reduction.
- All products are stable in alkaline and acid systems. A hydrotrope will be required for low cloud point materials depending on the formulation and intended end-use temperature.
- Easy-to-handle and non-gelling when added to water.
- Inherently biodegradable, approved for use as an inert in non-food pesticide applications under 40CFR180.910 & 180.930.
- DeIONIC LF-EP-15 may contribute defoaming properties due to its low cloud point.

Continued

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APPLICATIONS

- Mechanical dishwashing detergents
- High pressure spray cleaners
- Acid & alkaline cleaners
- Dry caustic and electrolyte cleaners
- Pesticide formulations
- Industrial metal cleaning
- Bottle washing
- Textile wetting and scouring
- Rinse-aid formulations
- Agricultural sprays

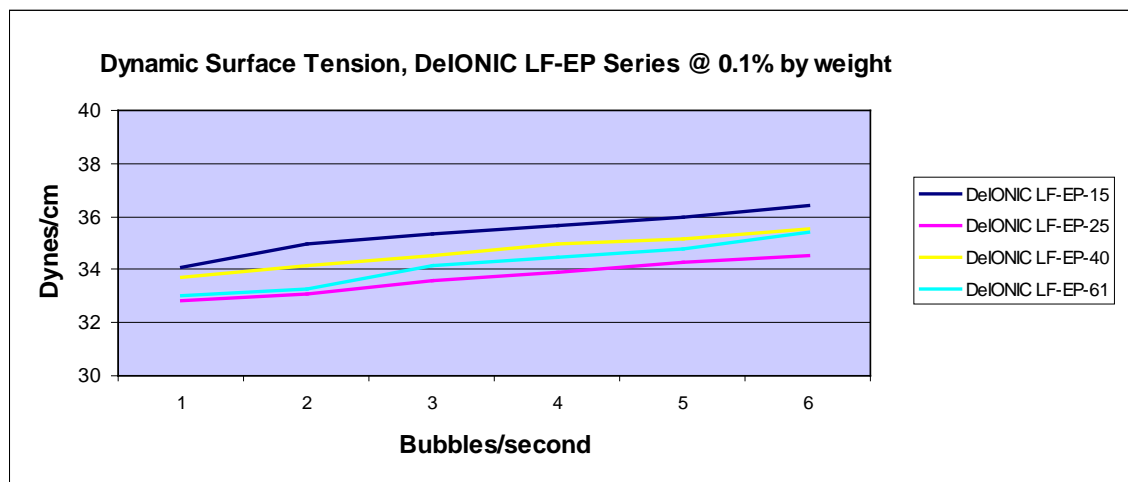
Modified Ross-Miles Foam Height

Foam height was determined at ambient temperature at 0.1% by weight in deionized water using a modified Ross-Miles graduated cylinder shake test.

	DeIOnIC LF-EP-15	DeIOnIC LF-EP-25	DeIOnIC LF-EP-40	DeIOnIC LF-EP-61
Initial	10 mls	15 mls	86 mls	90 mls
30 seconds	0 mls	1 mls	43 mls	55 mls
60 seconds	0 mls	0 mls	15 mls	45 mls
2 minutes	0 mls	0 mls	7 mls	40 mls

Dynamic Surface Tension

The dynamic surface tension of the DeIOnIC LF-EP series of products was determined at 0.1% by weight in deionized water at ambient temperature.



Draves Wetting of DeIOnIC LF-EP Series

Draves Wetting was determined at 0.1% by weight in deionized water at ambient temperature.

	DeIOnIC LF-EP-15	DeIOnIC LF-EP-25	DeIOnIC LF-EP-40	DeIOnIC LF-EP-61
Seconds	5	7	8	7

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