



# Flexisurf™ LO-30

Lauryl dimethylamine Oxide

## Overview

- 30% actives: dimethylamine oxides, primarily C12 (Lauryl)
- Hypochlorite and peroxide stable
- Foam booster and grease cutter
- Builds viscosity
- Compatible with nonionic, anionic and cationic surfactants
- Enhanced activity in acidic cleaners
- Versatile surfactant for wetting, emulsification, solubilizing and emulsification in acid, neutral and alkaline formulations
- Derived exclusively from All Natural feedstocks
- Ideal for use in Biobased cleaners
- Primarily CAS#1643-20-5/  
EINECS#216-700-6.

## Applications

- HI&I Hard surface cleaners
- Concentrated Liquid, high foaming formulations (acid or alkaline)
- Fine fabric detergents
- Hypochlorite, peracid and peroxide based cleaners
- Inert ingredient in non-food pesticides
- Personal Care: shampoos, handsoaps, bath products, creams and lotions, hair conditioners
- Textile applications: lubricant, emulsifier, wetting agent and dye dispersant, non-rewetting wetting agent
- FIFRA-Inert Ingredient

## Technical Information

Flexisurf LO-30 is a versatile natural ingredient feedstock based surfactant that contributes foaming, cleansing and solubilizing properties to formulations ranging from shampoos to oven cleaners. Effective in acidic, neutral and alkaline solutions, and stable in hypochlorite bleach and peroxide systems, multi-functional LO-30 contributes grease-cutting detergency and foam boosting. While classified as a nonionic surfactant, the activity of Flexisurf LO-30 is enhanced in acid-based formulations for added performance in hard-water and scale dissolving cleaners.

Exceptional foaming and detergency properties with compatibility in nonionic, anionic and cationic surfactant solutions suggest a wide range of applications such as in Personal Care formulations, Liquid Detergents, Household and Industrial Cleaners and in Industrial applications such as Mining, Oil Field and Electroplating.

## Formulary

Naturally derived, coconut oil-based, with greater than 85% biorenewable carbon, Flexisurf LO-30 is an environmentally responsible ingredient for detergents and cleaners. Cost effective, LO-30 replaces and combines the properties of non-biorenewable olefin-based ingredients for enhanced performance.

## Typical Properties

PROPERTY	VALUE
Appearance	Clear, colorless to yellow liquid
Odor	Mild
Ionic character	Nonionic
Water solubility	Soluble
Active content, %	30.0±0.5
pH (as is)	7.5±1.0
Density@25°C	0.96±0.02
Boiling Point	Approx. 100°C
Flash point	None (aqueous)
Storage	Freeze/thaw stable
Shelf life	12 months

## Packaging and Handling

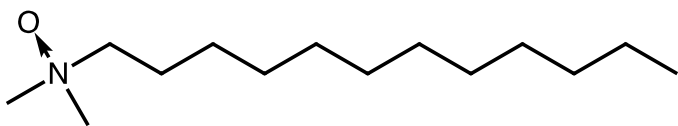
Flexisurf LO-30 is available in:  
275 gallon totes (Net Wt. 2250 lbs)  
55 gallon plastic drums (Net Wt. 450 lbs)  
5 gallon pails (Net Wt. 40 lbs).

Refer to the Safety Data Sheet (SDS) for information on the safe use, handling, and disposal of this product.

DOT Classification: Non-Regulated

Whether you're looking for a replacement product, or an ingredient for a specific attribute, give us a call. We can provide assistance based upon your particular formulation requirements and composition; please feel free to contact us.

*Please refer to back page for important information*



## Flexisurf LO-30: Versatile grease-cutting surfactant

Flexisurf LO-30 is one of the most versatile and widely used surfactants today. Characterized by effective and economical performance, naturally derived with high biodegradability and low aquatic toxicity, LO-30 is the go-to ingredient of choice for today's formulators.

Long recognized as a safe biodegradable surfactant (achieving primary biodegradation > 95% in 6 days: Swisher, R.D. "Surfactant Biodegradation" Vol. 18, 2nd Edition, Marcel Dekker, Inc., 1987, pp. 877. ), and based on a >85% bio-renewable carbon value, Flexisurf LO-30 is a "Green" ingredient for environmentally responsible cleaning product formulations.

Flexisurf LO-30 is the surfactant of choice...because it works.

- **Draves wetting**

LO-30 is of only a handful of the best surfactants for Draves Wetting results (just seconds in a 0.5% active/3 gram hook evaluation), and the only ingredient in that group based on renewable feedstock.

- **Surface tension reduction**

In the broad class of alkyl surfactants, LO-30 is within range of the best ingredients for surface tension reduction (33 dynes/cm versus 30 dynes/cm for NPE-9).

- **Caustic stability**

Soluble in about 16% NaOH (1% active), LO-30 has the advantage over many surfactants with higher caustic stability with stability in hypochlorite and peroxide bleaches.

- **Coupling**

Primarily an effective foam booster, LO-30 functions as a coupling agent/hydrotrope for compatibilizing nonionic surfactant/glycol ether containing degreasers with about the same performance as SXS, an ingredient that detracts from foaming and detergency.

*The following example formulations illustrate the flexibility of Flexisurf LO-30:*

Glass and Multi-Surface Cleaner	
Ingredient	Wt. %
Water	to 100
Na <sub>4</sub> EDTA, 38%	0.1
Flexisurf LO-30	0.4
Glycerin <sup>(1)</sup>	0.2
Monoethanolamine <sup>(2)</sup>	0.4
Ethyleneglycol monohexyl ether <sup>(3)</sup>	0.25
Isopropanol	1.5
Thetawet FS-8050 <sup>(4)</sup>	0.1
Dye/Fragrance	q.s.
Ready-to-Use Formulation notes: (1) provides slip for ease of wiping, (2) provides non-streak alkalinity for grease cutting performance, (3) moderates evaporation for streak resistance-consider hexanol or ethyleneglycol monobutyl ether as alternative, (4) for fast even wetting of surfaces.	
Thickened Tub&Tile Cleaner with Bleach	
Ingredient	Wt. %
Water	to 100
Carbopol 690 <sup>(1)</sup>	0.5
Flexisurf LO-30	0.2
Potassium hydroxide, 45%	5.0
Potassium silicate 2:1, 39%	5.0
Potassium carbonate	5.0
Sodium hypochlorite, 12.5%	8.0
Ready-to-Use Charge ingredients in order listed. Sift Carbopol thickener slowly into vortex at ambient temperature and allow to fully wet. Formulation notes: (1) viscosifier for added "cling"	

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