



Flexisurf™ DDO-30

Dodecyl dimethylamine Oxide

Overview

- 30% active Dodecyl dimethylamine oxide in water
- Non-GMO status
- Renewably sourced ,coconut oil based content
- Clear, with little to no color
- Excellent solubility
- Uses a highly refined amine for ease of formulating clear solutions
- 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
- CAS# 1643-20-5

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 DDO-30 is a versatile nonionic 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 DDO-30 contributes grease-cutting detergency and foam boosting. While classified as a nonionic surfactant, the activity of Flexisurf DDO-30 is enhanced in acid-based formulations for added performance in hard-water and scale dissolving cleaners. Flexisurf DDO-30 has 85% biorenewable carbon.

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

Cost effective, DDO-30 formulates well into hard surface cleaners and high foaming liquid formulations. The product is compatible with hypochlorite, peracid, and peroxide based formulations.

Typical Properties

PROPERTY	VALUE
Appearance	Clear, colorless to yellow liquid
Odor	Slight
Ionic character	Nonionic
Water solubility	Soluble
Active content, %	30.0±1.0
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. Store at temperatures not to exceed 50°C (122°F). Protect from sunlight.
Shelf life	12 months

Packaging and Handling

Flexisurf DDO-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 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.

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

Flexisurf DDO-30: Versatile grease-cutting surfactant

Flexisurf DDO-30 is a versatile and widely used surfactant. Characterized by effective and economical performance, Flexisurf DDO-30 is an excellent choice for cleaning formulations and has excellent solubility.

Flexisurf DDO-30 provides several important performance benefits:

- **Draves wetting**

Flexisurf DDO-30 is an excellent surfactant for Draves Wetting results (just seconds in a 0.5% active/3 gram hook evaluation).

- **Surface tension reduction**

In the broad class of alkyl surfactants, Flexisurf DDO-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), Flexisurf DDO-30 has an advantage over many surfactants with higher caustic stability for stability in hypochlorite and peroxide bleaches.

- **Coupling**

Primarily an effective foam booster, Flexisurf DDO-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.

Glass and Multi-Surface Cleaner	
Ingredient	Wt. %
Water	to 100
Na ₄ EDTA, 38%	0.1
Flexisurf DDO-30	0.4
Glycerin ⁽¹⁾	0.2
Monoethanolamine ⁽²⁾	0.4
Ethyleneglycol monohexyl ether ⁽³⁾	0.25
Isopropanol	1.5
Thetawet FS-8050 ⁽⁴⁾	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
Hydrochloric acid, 37% ⁽¹⁾	0.1
Carbopol 690 ⁽²⁾	0.5
Flexisurf DDO-30	0.2
Potassium hydroxide, 45%	5
Potassium silicate 2:1, 39%	5
Potassium carbonate	5
Sodium hypochlorite, 12.5%	8
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) dispersion aid (2) viscosifier for added "cling"	

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