



NUMBER 4485-2 (Supersedes 4485-1)

Dextrol™ MF-31 phosphate ester surfactant

For Metalworking Fluids

Description

Dextrol MF-31 phosphate ester surfactant is the free-acid form of an ethoxylated phosphate ester. It is designed to impart improved wetting, emulsification and dispersion in metal-working fluids. Dextrol MF-31 phosphate ester surfactant provides outstanding detergency and metal-cleaning. Furthermore, it has additional benefits of corrosion inhibition and flash rusting prevention. It will protect treated surfaces from acid corrosion while not affecting the surface finish after machining.

Dextrol MF-31 phosphate ester surfactant does not contain any alkyl phenol ethoxylates (APEOs).

Key Attributes

- Excellent emulsification properties.
- Used across a broad range of formulations, with a variety of additives.
- Corrosion inhibition.

Applications and Usage Notes

- Wetting metal surfaces to provide outstanding detergency during the metalworking process.
- The dispersing power of Dextrol MF-31 phosphate ester surfactant serves to remove fines from the working surfaces.
- Form film on a fresh metal surface, serving to protect the surface from flash rusting and acid corrosion.

Recommended Use Levels

Since there are a wide variety of end-use formulations and applications that can use Dextrol MF-31 phosphate ester surfactant, use levels can be as high as 4% in the concentrate. However, in most cases use levels are generally in the 0.2-1% range.

Dextrol MF-31 phosphate ester surfactant is soluble in most petroleum oils, aliphatic and aromatic solvents and in various synthetic lubricant bases. Generally, it is neutralized with amines to enhance water solubility, cleaning and emulsification characteristics.

Typical Product Properties

Chemical type:	Phosphate ester (anionic)
Appearance:	Clear to slightly amber liquid
Active solids, weight %:	98 ± 1%
Viscosity ^(a) , as supplied (cps or mPa·s):	500-1,500
Density, g/L:	1.01-1.03
Acid number, pH 5.5:	101-110
pH, 10% aqueous solution:	1.5-2.5
Flash point:	> 300°F (149°C)

^(a) Brookfield RVT viscosity at 25°C (77°F).

Packaging Information

Product	Physical Form	Pkg Type	Net Wt	Pkg Type	Net Wt
Dextrol™ MF-31	Viscous Liquid	IBC 1000L	2400 lb (1088.6 kg)	Drum 200L	470 lb (213.19 kg)

Product Safety Information

All components of Dextrol MF-31 phosphate ester surfactant are listed on TSCA chemical inventory (USA).

Volatile Organic Compounds (VOC5)

Dextrol MF-31 phosphate ester surfactant is formulated as solvent-free. As such, the VOC content of this product should be non-detectable using the standard US EPA Method #24.

APEO & Glycol Content

Dextrol MF-31 phosphate ester surfactant does not contain any alkyl phenol ethoxylates (APEOs). Glycols are not intentionally added to, or known to be present in, Dextrol MF-31 phosphate ester surfactant.

Please read and understand the Safety Data Sheet (SDS) before using this product.

To learn more, visit ashland.com

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