

Technical Bulletin

Plurafac® S 505 LF



Description

Plurafac® S 505 LF is an alkoxyated linear alcohol designed specifically for low-foaming applications such as mechanical dishwashing, metal cleaning, dairy equipment cleaning and pulp and paper additives. Plurafac® S 505 LF surfactant is compatible with anionic, cationic and other nonionic surfactants.

Solubility and Stability

Plurafac® S 505 LF is soluble in common chlorinated solvents and in aromatic solvents such as benzene, toluene and xylene. It is also soluble in polar solvents such as alcohols, glycol ethers and esters, and in water at temperatures below their cloud points. It is essentially insoluble in aliphatic hydrocarbons. Plurafac® S 505 LF has been found to be stable when in contact with dry alkalis.

Applications

Rinse Aids for Mechanical Dishwashing

Plurafac® S 505 LF surfactant is effective in rinse aids for use in household, restaurant and institutional dishwashing operations. Injection devices can be used to supply the required amount of rinse aid. Concentrations of 50 to 150 ppm of Plurafac® S 505 LF surfactant in the final rinse cycle are recommended.

Rinse aids can also be formulated with hydrotropes such as sodium toluene sulfonate and/or isopropanol to achieve phase stability at any desired temperature. Isopropanol is frequently used as a solvent to give clear, stable concentrations of the surfactant. Generally, a solution of 25% isopropanol, 25% water and 50% surfactant will give a solution that is stable over a wide range of temperatures. The addition of hydrotrope or alcohol does not impair the low-foaming and good rinsing properties of the Plurafac® S 505 LF.

Mechanical Dishwashing Detergents

An excellent automatic dishwashing detergent is obtained when 2-5% of Plurafac® S 505 LF is formulated with typical alkaline builders such as silicates, polyphosphates and carbonates. The low-foaming characteristic of this surfactant does not impede the mechanical action of the washer. Maximum cleansing and rinsing is obtained in all degrees of water hardness, and water spotting is minimized.

Metal Cleaning:

The excellent alkali and acid stability of the Plurafac® S 505 LF surfactant, in conjunction with its low-foaming and high detergency, makes it ideally suited for a variety of metal cleaning applications including pressure spray washing.

Dairy Equipment Cleaning

The defoaming properties of the Plurafac® S 505 LF, particularly in the presence of proteinaceous fatty oils, make it an excellent additive to both alkaline and acid cleaners for the dairy industry.

Pulp and Paper

Because of its low-foaming characteristics and excellent wetting properties, Plurafac® S 505 LF is recommended for use as a rewetting agent for paper toweling.

Specifications	
Cloud point (1% aqueous), °C	45 – 49
pH (1% aqueous)	5.5 – 7.0
Color (APHA)	100 max.
Water, wt %	0.5 max.
Typical properties	
Odor	Mild
Specific Gravity @ 15/15 °C	1.02
Viscosity @ 25 °C (cs)	125
Flash Point (COC), °C	232
Freezing Point, °C	8
Surface Active Properties	
Surface Tension (dynes/cm) @ 25 °C	
0.1% by weight	33
0.01% by weight	33
0.001% by weight	37
Interfacial Tension vs. mineral oil (dynes/cm) @ 25 °C	
0.1% by weight	6
0.01% by weight	7
0.001% by weight	13
Draves Wetting Time (3g hook, 5g cotton skein), s	
0.50% by weight @ 25° C	5
0.25% by weight	7
0.10% by weight	18
0.05% by weight	39
0.50% by weight @ 60° C	<1
0.25% by weight	3
0.10% by weight	21
0.05% by weight	52
Ross Miles Foam Height, (mm) initial / after 5 minutes	
0.50% by weight @ 25° C	135 / 15
0.25% by weight	120 / 10
0.10% by weight	60 / 10
0.05% by weight	60 / 10
0.50% by weight @ 60° C	20 / 0
0.25% by weight	15 / 5
0.10% by weight	10 / 0
0.05% by weight	10 / 0

Storage and Handling:

Plurafac® S 505 LF is easily handled under ordinary commercial conditions. It should be stored at temperatures between 21°C and 49°C (70-120°F). At temperatures below this range, slight turbidity may develop. It will disappear when the temperature is returned to a safe range. Prolonged storage at temperatures above 49°C may cause discoloration.

Heating equipment will be required if temperatures are expected to fall below 10°C (50°F). Warm water should be used as the heat source. Avoid the use of high-pressure steam, which may cause discoloration in the vicinity of the heating coil.

Shelf Life

BASF will endorse the results on the certificate of analysis for a period of up to two years from the date of manufacture for material in original, unopened, properly stored containers. Beyond one year, we recommend the quality of the material be confirmed prior to use, by retesting the certificate of analysis parameters.

Please refer to the Material Safety Data Sheet (MSDS) for this product for instructions on safe and proper handling and disposal.

Plurafac® is a registered trademark of BASF in many countries

For More Information:**Order Placement**

To place orders for delivery in the United States or Canada, please call our toll free number (800) 443-6460.

For Other Information

Including product literature and Material Safety Data Sheets please call (734) 324-6101.

Or Visit Our Website At:

www.performance.basf-corp.com

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