

Masurf[®] 1250&1250A

High Performance Surfactant Hydrotrope

Overview

MASURF 1250 and 1250A are highly efficient, hypochlorite stable surfactants that deliver exceptional low foam hydrotrope performance. 1250/1250A represents unique system that contributes surface activity, wetting, and detergency with excellent solubility and stability in alkaline and high electrolyte systems. MASURF 1250/1250A is recommended for all alkaline applications where efficient low foam detergency is critical, including Household & Industrial detergents, Spray Wash formulations, Textile mercerizing bath additives, Hypochlorite containing detergents and Automatic Dishwash liquid detergents.

The optimized micellar performance of MASURF 1250/1250A allows for high alkaline stability without the loss of detergency found in typical hydrotrope systems. 1250 is consistently low is color and odor, and dissolves quickly into water without a gel phase. Masurf 1250/1250A is soluble in high electrolyte systems, with solubility in 10% sodium hydroxide, 20% potassium hydroxide, or 20% tetrapotassium pyrophosphate. With a relatively high CMC of 4%, 1250/1250A exhibits low foaming below the CMC, and high stable foam above.

MASURF 1250/1250A is non-flammable, non-VOC, low foaming, alkaline stable, and water soluble.

Typical Properties

Classification	Aqueous surfactant solution
Masurf 1250	Sodium alkanoate
Masurf 1250A.....	Potassium alkanoate
Charge.....	Anionic
Activity	45%
Physical form.....	Water white liquid
Specific gravity (25°C).....	1.07±0.04
Viscosity (25°C).....	<500cps (Brookfield)
pH.....	9.0±1.5
Boiling Point	212°F(100°C)
Flash point.....	>200°F (PMCC)
Shipping	Non-Red Label

Handling Information

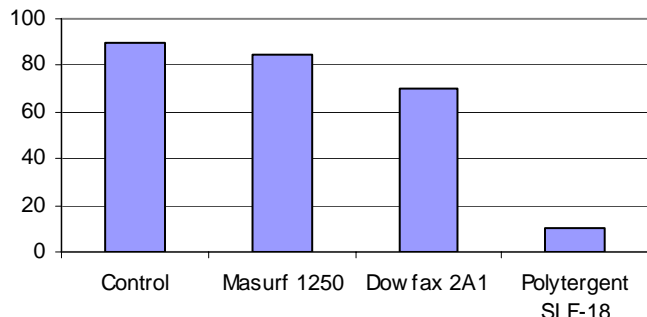
Refer to the Material Safety Data Sheet (MSDS) available from Mason Chemical Company for information on the safe use, handling and disposal of this product.

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Masurf® 1250&1250A

MASURF 1250/1250A is used to formulate stable high cloud point alkaline concentrates that readily dilute with no loss in detergency. 1250/1250A is a unique product that combines high detergency with controlled low foaming characteristics and hypochlorite stability. The following data illustrate the hypochlorite stability of Masurf 1250 with other low foam surfactants and coupling agents:

% Available Chlorine/60 Days @ 25°C



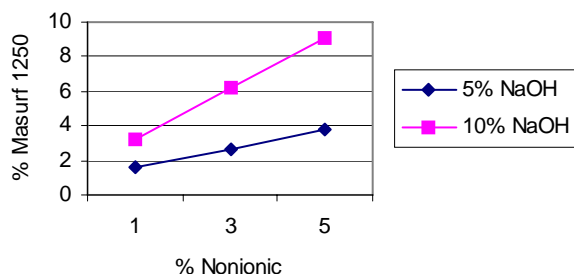
Notes:

Liquid Automatic Dishwash Concentrate:
 Sodium Hypochlorite, 5.25% 92.2%
 Sodium Hydroxide, 50% 5.6%
 Surfactant*, as supplied 2.2%

*water for control

MASURF 1250 is an effective coupling agent for nonionic surfactants in highly alkaline solutions. The graph below illustrates this effect:

% Masurf 1250 for 70°C Cloud Point



Notes:

Weight of Masurf 1250 to achieve 70°C Cloud Point with nonionic surfactant (Nonylphenol 10ETO) at the concentrations indicated.

When formulated into Specialty Cleaning products, MASURF 1250 is an effective linear alcohol ethoxylate surfactant hydrotrope in highly alkaline low foam systems. The formulation below illustrates this effect:

Low Temperature Metal Cleaning Concentrate

Ingredients:	Wt. %
Water.....	81.4
Sodium Carbonate, monohydrate	3.0
Sodium Hydroxide, 50%.....	1.0
Sodium Metasilicate, pentahydrate.....	2.0
Borax	0.3
Cobratec TT-100	0.3
Masurf FAP-112	0.5
Dequest 2000	1.0
Neodol 91-6.....	2.0
Masurf NRW	2.0
Masurf 1250	6.5

Notes:

1:10 Concentrate for low temperature (70-90°F) solution metal cleaning w/corrosion inhibitors.

Cobratec TT-100, Tolytriazole: corrosion inhibitor, PMC Specialties Group, Inc.
 Masurf FAP-112, Functionalized Anionic Polymer: anti-precipitating agent
 Dequest 2000, Amino tri (methylene-phosphonic acid): chelating agent, Solutia
 Neodol 91-6, C₉₋₁₁ 6ETO: nonionic surfactant, Shell
 Masurf NRW, Anionic Non-Rewetting Surfactant
 Masurf 1250, High Performance Hydrotrope