

Masurf[®] Emulsifying Wax NF

Nonionic Emulsifier for Cosmetics & Pharmaceuticals

Overview

MASURF EMULSIFYING WAX is a nonionic self-emulsifying wax prepared from high purity cetearyl alcohol and polysorbate 60. **Monographed in the National Formulary NF XVII**, MASURF EMULSIFYING WAX is the premier nonionic self-emulsifying wax used in the cosmetic and pharmaceutical industries, and is now available in a convenient pastille form.

MASURF EMULSIFYING WAX produces thick, solid emulsions without the addition of stiffening waxes at concentrations as low as 5-10%. MASURF EMULSIFYING WAX emulsions show excellent compatibility in anionic, cationic and nonionic systems, and produce stable emulsions at pH 3-13.

A mild ingredient with a proven safety record, use MASURF EMULSIFYING WAX in **Creams, Lotions, Shampoos, Conditioners, Pomades, Sunscreens, Pharmaceutical Ointments, Salves, Skin Protection, Creams and other emulsions.**

MASURF EMULSIFYING WAX is a non-toxic, non-irritating concentrated surfactant blend in pastillated form. Exercise normal handling precautions by using appropriate eye and skin protection. Refer to Material Safety Data Sheet.

INCI Name: Cetearyl Alcohol and Polysorbate 60.
CAS#s: 67762-27-0 (36653-82-4, 112-92-5), 9005-67-8

Typical Properties

Water solubility	Dispersible
Physical form	Creamy white waxy pastilles
Color (Gardner)	5 maximum
Actives content	100%
Hydroxyl value	178-192
Saponification value	14 maximum
Acid value	2.5 maximum
Iodine value	3.5 maximum
Peroxide value	3.5ppm maximum
pH, 3% dispersion	6.5±1.0
Melting Temperature	118-126°F(48-52°C)
Flash point	>300°F (PMCC)
RVOC, U.S. EPA, %	0

Handling Information

Refer to and follow the guidelines in 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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FUNCTIONS:

In cosmetic and pharmaceutical formulations, MASURF EMULSIFYING WAX has proven to be a desirable alternative to glyceryl monostearate, diglycol stearate, propylene glycol monostearate, self-emulsifying fatty alcohol blends and other wax-like emulsifiers. MASURF EMULSIFYING WAX yields emulsions of superior stability, elegance and efficacy when substituted at equal to lower ratios for these emulsifiers. MASURF EMULSIFYING WAX offers advantages over carbomer stabilized emulsions: emulsifier/thickener in one, compatible with cationic materials, no neutralization is needed in the formulation of creams and lotions, and extremely tolerant of inorganic salts.

MASURF EMULSIFYING WAX can be used to produce viscous or thin emulsions, depending upon the concentration at which it is used. At low concentrations of 2-3%, MASURF EMULSIFYING WAX provides optimum emulsion stability supplemented with other emulsifiers. Fluid emulsions can be easily produced using MASURF EMULSIFYING WAX with any of these commonly used materials: Ethoxylated lanolin alcohols, ethoxylated fatty alcohols, sorbitan esters and ethoxylated sorbitan esters, phosphate esters, or ethoxylated lanolin.

USAGE:

MASURF EMULSIFYING WAX emulsions can be prepared easily by incorporating MASURF EMULSIFYING WAX in the oil phase and then heating it and the water phase separately to 70-80°C. Once the two phases reach this temperature, the water phase is added to the oil phase in a thin stream using mechanical agitation. The emulsion is then stirred down to a temperature above the solidification point of the cream (to 30°C for a lotion). These emulsions are very stable, easy spreading systems, but can be homogenized if desired. Utilize **Enhansys™ Fortifying Enhancement Systems** for self-preserving cosmetic preparations.

The following proportions can be used as a general guideline:

	Ingredient % Weight/Weight										
Masurf Emulsifying Wax	10	10	10	10	10	10	10	10	10	10	15
Mineral Oil	10	20	30	40	50						
Petrolatum						10	20	30	40	50	
Paraffin Wax											10
Water	80	70	60	50	40	80	70	60	50	40	75

COSMETIC APPLICATIONS:

MASURF EMULSIFYING WAX has been used successfully in hair relaxers/straighteners for many years. Showing better stability over time than other emulsifiers, it is still the emulsifier of choice for these preparations. MASURF EMULSIFYING WAX has also been used in many types of skin care and hair care formulations and has applications as an emulsifier/thickener in products such as the following: **Hair conditioners and cream rinses, Hair bleaches, Moisturizing creams and lotions, Baby lotions, Indoor and outdoor tanning preparations, Sunscreen creams and lotions, Nail creams and lotions, Night creams and lotions, Wrinkle smoothing creams and lotions (wrinkle reducers), Blushers, Eye makeup and makeup bases, Wave sets, and Hair relaxers/straighteners**

PHARMACEUTICAL APPLICATIONS:

Due to its nonionic nature, MASURF EMULSIFYING WAX will not interact with ionic pharmaceutical actives. MASURF EMULSIFYING WAX creams can usually be sterilized by autoclaving. Its many pharmaceutical applications include the following: **Manufacture of hydrophilic petrolatum, Antibiotic creams and lotions, Hydrocortisone creams and lotions, Acne/blemish creams and lotions, Burn and sunburn creams, lotions and mousses, External analgesic rubs, Medicated creams and lotions, Sunscreen creams, lotions and mousses, Moisturizing creams and lotions, Skin protectant creams and lotions.**

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CAS/EINECS#s: 67762-27-0(36653-82-4, 112-92-5)/267-008-6 (253-149-0, 204-017-6) and 9005-67-8/Polymer

US TOXIC SUBSTANCES CONTROL ACT/INVENTORY STATUS

Complies with the requirements of the following chemical inventories: US (TSCA, FIFRA-Pesticide Inert Ingredients), Canada (DSL), European Communities (EINECS, NLP), Japan (ENCS), Australia (AICS), Korea (ECL), Philippines (PICCS), ASIA-PAC.

