MANTA

Technical Data Sheet

Version: 1.0

Manta E1035 Water-in-oil Emulsifier

Description

Manta E1035 is a specialized alkyl-modified, branched silicone emulsifier. It is an alkyl polyether polydimethylsiloxane. Unlike standard linear silicones, its unique branched structure and the addition of a Lauryl (C12) alkyl chain provide superior compatibility with silicone oils, organic oils, and esters.

It is designed for formulating stable Water-in-Oil (W/O) and Water-in-Silicone (W/Si) emulsions. It demonstrates excellent dispersion capabilities for powders and pigments, making it ideal for formulations with high powder content or high levels of organic UV absorbers. Additionally, low-emulsifier/high-water content formulas using Manta E1035 can achieve a unique "water release" (water-drop) effect.

Performance comparable to Shin-Etsu KF-6038.

Typical Physical Properties

INCI/CTFA	Lauryl PEG-9 Polydimethylsiloxyethyl Dimethicone
Appearance	Light yellow liquid
Refractive index (25°C)	1.4300-1.4500
Specific gravity (25°C)	0.950-1.050
Viscosity (cSt, 25°C)	100~1000

Properties

- Excellent Emulsification: Strong capability for both W/Si and W/O systems;
- Broad Compatibility: Good compatibility with silicone oils, organic oils, and esters due to the lipophilic alkyl chain;
- Sensory Profile: Imparts a soft, silky, and non-sticky skin feel to the final product;
- Process Efficiency: Easy to emulsify; supports cold processing (room temperature operation) if all raw materials are liquid;
- Powder Dispersion: Excellent ability to disperse powders and pigments.

Applications

Manta E1035 is widely used in personal care products, including:

1. Makeup: Cushion compacts, BB/CC creams, Liquid foundations, Hydrogel foundations.
2. Skin Care: W/O creams and lotions, "Water-drop" or "Water-burst" creams.
3. Sun Care: Sunscreen lotions and fluids (especially those with high organic filters).

How to use

Process:

Mix the oil and emulsifier evenly first;
Under rapid stirring, slowly add the water phase into the oil phase in portions;
Stir quickly and evenly until emulsified;

Stability Tips:
Increasing the stirring speed can improve the stability of the emulsion system.
Adding antifreeze agents (e.g., propylene glycol, glycerin) improves freeze-thaw stability.
Increasing the proportion of the water phase will increase the viscosity of the system.
Cold Processing: If all raw materials are liquid, they can be emulsified at room temperature without homogenization; a stable emulsion can be obtained simply by rapid stirring.

Recommended Dosage:
As Main Emulsifier: 1.0% – 5.0%
As Co-emulsifier: 0.1% – 1.5%

Packing

In 16kg pail

Safety and Storage

Keep away from heat and open flame. Prevent from the exposure of moisture, acid, alkalis and other impurities. When stored in the original unopened containers, this product has a usable life of 24 months from the date of production.

Contact Information

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