MANTA

Technical Data Sheet

Version: 1.0

# Manta F1039 Water Soluble Silicone Fluid

## Description

Manta F1039 is a surface-active silicone copolymer supplied as a clear, low-viscosity liquid. It features a specific ratio of hydrophilic polyether chains (PEG-12) grafted onto a hydrophobic siloxane backbone.

This amphiphilic structure grants Manta F1039 exceptional surface tension reduction capabilities. Unlike solid waxes, it dissolves instantly in cold water to form crystal-clear solutions. It functions as a highly efficient wetting agent, allowing formulations to spread effortlessly across skin and hair. Additionally, it acts as a hydro-emollient, delivering the characteristic slip of silicone without greasiness, while significantly improving the foam density and stability in surfactant-based cleansing systems.

## Typical Physical Properties

| | |
|---|---|
| INCI/CTFA | PEG-12 Dimethicone |
| Chemical Name: | Silicone Polyether Copolymer (Liquid Surfactant) |
| CAS NO.: | 68937-54-2 |
| Appearance | Colorless to slightly yellow transparent liquid |
| Refractive index (25°C) | 1.4500-1.4600 |
| Specific gravity (25°C) | 1.070-1.080 |
| Viscosity (cSt, 25°C) | 250-500 |
| Cloud point (°C) | ≥ 90 |

## Features

1. Functions as a high-performance non-ionic surfactant with excellent interfacial wetting properties.
2. Completely miscible with water in any proportion, forming clear and stable solutions.
3. Highly breathable and non-occlusive, ensuring comfort in leave-on formulations.
4. Acts as a superior foam stabilizer, increasing foam creaminess and volume in cleansing products.
5. Imparts a remarkable silky-soft sensory effect and long-lasting radiance to hair and skin.
6. Enhances the uniform spreading of formulations and maintains long-term luster.
7. Physiologically inert.

## Applications

Manta F1039 is ideal for a wide range of water-based and emulsion products, including:

1. Cleansing Products: Facial cleansers, body washes, and liquid soaps (improves foam and reduces dryness).
2. Hair Care: Styling gels, aqueous hair tonics, and clear shampoos.
3. Skin Care: Moisturizing creams, lotions, and alcohol-based toners.

4. Specialized Applications: Functions as a foam stabilizer for aerosol products and a plasticizer for organic resins in styling formulations.

## How to Use

1. Processing: Highly versatile and easy to incorporate; it can be added directly to the water phase of any formulation. In clear gel or toner systems, it can be cold-blended with other film-forming polymers to enhance softness and brightness without affecting clarity.
2. Emulsification: In creams and lotions, it acts as a secondary emulsifier or sensory modifier and should be added to the water phase prior to emulsification.
3. Recommended Dosage: 1.0% - 3.0% for most skin and hair care applications; can be adjusted based on the desired level of foam stability and silkiness.

## Packing

In pails, drums

## 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

Nanjing Manta New Material Co., Ltd
Add: Room 102-247, Building 17, No. 1 Qiliqiao North Road, Nanjing Area of the China (Jiangsu) Pilot Free Trade Zone, Nanjing, China
Factory: Miaoguan Town Industrial Park, Sishui County, Jining City, Shandong Province, China
Mob: 0086 18962800162
Mail:sales@mantasil.com Web:www.mantasilicone.com