MANTA

Technical Data Sheet

Version: 1.0

Manta F1045 Cyclic Silicone Fluid

Description

Manta F1045 is a high-purity, volatile polydimethylcyclosiloxane fluid composed primarily of Cyclopentasiloxane (D5). It functions as a premium transient carrier for active ingredients and oils in personal care formulations.

Characterized by its low surface tension and low heat of vaporization, Manta F1045 evaporates gently from the skin without creating a cooling sensation. It acts as a super-spreading agent, allowing formulations to glide effortlessly before evaporating to leave a distinctively dry, non-greasy, and tack-free finish.

Typical Physical Properties

INCI/CTFA	Cyclopentasiloxane
Chemical Name:	Decamethylcyclopentasiloxane (Cyclic Volatile Silicone)
CAS Number:	541-02-6
Appearance	Colorless transparent fluid
Refractive index (25°C)	1.3850-1.4050
Specific gravity (25°C)	0.950-0.960
Viscosity (cSt, 25°C)	3.0-5.0

Properties

1. Acts as a highly efficient transient (volatile) silicone carrier.
2. Highly compatible and miscible with a wide range of cosmetic ingredients.
3. Physiologically inert, colorless, and odorless.
4. Delivers exceptional spreadability and is easily emulsified into standard cosmetic systems.
5. Imparts a uniquely light, non-greasy, and tack-free sensory feel while allowing the skin to breathe.

Applications

Manta F1045 can be widely used in a variety of personal care products, including:

1. Skin Care: Facial creams, serums, and body lotions.
2. Sun Care: Sunscreens (improves spreadability and aids in physical pigment dispersion).
3. Color Cosmetics: Liquid foundations, concealers, and makeup primers.
4. Hair Care: Leave-in conditioners and smoothing serums.
5. Body Care: Antiperspirants and deodorants (provides a dry, clean delivery system).

How to Use

1. Blending: Can be used alone or easily blended with mineral oils, isopropyl alcohol, and natural botanical oils to obtain a stable, uniform solution.

2. Dilution & Carrier: Serves as an excellent diluent for high-viscosity silicone gums or elastomers, as well as a superior carrier for fragrances and active cosmetic ingredients.
3. Temperature Control: Due to its highly volatile nature, it is strictly recommended to process and formulate at room temperature. If heating is required for other phase ingredients, add F1045 during the cool-down phase (below 50°C) in closed vessels to prevent evaporation.
4. Recommended Dosage: 0.5% - 10.0% of the total formulation, depending on the specific application and desired evaporation profile.

Packing

In 50kg pail, 190kg iron drum

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