EcoSmooth™ Delight Sensory Modifier

Description
A versatile and affordable sensory modifier for skin care application.

INCI name: C14-22 Alkane (and) Ethylene/Octene Copolymer

Standard Product Characteristics
• 100% Hydrophobic material
• Preservative-free
• Odorless
• Non-ionic, not sensitive to pH system
• Can be used in hot process only
• Not tested on animals

Performance Benefits
• Offers easy-spreading and cushioning feel
• Offers smoothness and moisturizing after-feel
• Helps reduce oiliness, greasiness, and tackiness of formulations
• Quick absorption
• Enhances aesthetics of volatile hydrocarbons, esters and silicones
• Offers soft focus
• Acts as a structuring agent for hydrocarbon/ester emollients

Applications
• Moisturizing creams and lotions
• Anti-aging and BB/CC/DD Creams
• Shaving creams/gels
• Color cosmetics
• Moisturizing oils

Physical Properties
The following are typical properties of EcoSmooth™ Delight Sensory Modifier; they are not to be considered product specifications.

Appearance: ...................................................Opaque, off-white to white viscous material
Recommended use levels (AS IS): .......... 2-10%
% Solids (Ethylene/Octene Copolymer): ....... 14-16%
Viscosity (Brookfield DV-1 @ 25° C, Helipath Spindle TF @ 5 rpm,20s): ............500,000-1,200,000 cPs

For product specifications, please contact Customer Information Group (CIG) of Dow.
EcoSmooth™ Delight Sensory Modifier is a viscous mixture made by dispersing partially crystalline and partially amorphous Polyolefins (Ethylene/Octene Copolymer) in hydrocarbon solvent. It consists of both short chain and polymeric hydrocarbons. The optimal ratio of crystalline and amorphous phases of the Polyolefins creates a 3-dimensional physical network structure, helping to deliver the sensory benefits, as well as the oil structuring and soft-focused performance.

EcoSmooth Delight can be formulated into oil-in-water emulsions, water-in-oil emulsions and anhydrous products. It should be added directly to the oil phase with sufficient mixing and heating. Dependent on each formulation, the heating temperature may go up to 80-85°C. For ease of use, its viscosity and melting point may be reduced by blending with hydrocarbon and ester type of emollients. EcoSmooth Delight needs to be fully melted in the oil phase (make sure there are no gel particles and chunky material) before adding the oil phase into the water phase. High shear devices such as homogenizers are recommended during the emulsion stage. Sufficient mixing during the cooling stage is also needed to avoid precipitation of small gel particles. More detailed formulation guidance and tips are included in two additional documents (EcoSmooth Delight Formulation Guidance and EcoSmooth Delight Frequently Asked Questions).

Slight oil separation of EcoSmooth Delight can happen. If this condition is observed, it can be resolved by remixing EcoSmooth Delight without having a negative impact on the performance.

EcoSmooth Delight is a viscous product but has the unique characteristic of being a shear-thinning material (Figure 1). The viscosity was tested at 25°C.

Figure 1. Rheological Performance of EcoSmooth™ Delight Sensory Modifier

Pump recommendation:
Due to the high viscosity and shear-thinning nature of EcoSmooth Delight, a progressive cavity pump such as a Seepex BN series pump is recommended. Customers may also wish to heat EcoSmooth Delight to a temperature of 40-50°C to aid in flowability while pumping. EcoSmooth Delight may also be handled like a solid at room temperature and transferred with a scoop.
Handling Precautions

Before using this product, consult the Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for details on product hazards, recommended handling precautions and product storage.

Storage

Store products in tightly closed original containers at temperatures recommended on the product label.

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user’s responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products – from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including Safety Data Sheets (SDS), should be consulted prior to use of Dow products. Current Safety Data Sheets are available from Dow.

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