TECHNICAL DATA SHEET

ELEMENTIS

BENTONE® ULTIMATE ISD

Non-animal origin rheological additive for cosmetics and toiletries

GENERAL INFORMATION

BENTONE ULTIMATE ISD is a specially prepared dispersion of an organically modified hectorite in Isododecane.

This grade is designed with a high active content to impart rheological control and suspension in cosmetic products.

BENTONE ULTIMATE ISD applies easily without leaving a greasy film on the skin. It provides thermostable viscosity control of the emulsion's oil phase, improves application properties, enhances skin-feel, improves suspension and imparts a pleasant residual silkiness to the skin. It is also particularly useful in emulsions and can be used in "cold process" systems.

BENTONE ULTIMATE ISD is an alternative to traditional polymer or cellulose-based thickeners for stabilising emulsions.

INCI NAME

Isododecane, Disteardimonium Hectorite, Glyceryl Oleate

CHEMICAL & PHYSICAL PROPERTIES

Color / Form	Light buff
Viscosity, Brookfield Helipath, TF spindle, mm cps @ 0.5 rpm	6.0—15.0
Infrared	To match standard
% Ash	10.0—14.0
Microbial Content	Less than 100 cfu/g

These are typical properties not to be used for specification purposes.

APPLICATIONS

- Mascara
- Eye shadow
- Lip care
- Sun care products
- Creams and lotions
- Antiperspirants

KEY PROPERTIES

Non-animal origin

Rheological control

- Predictable, reproducible and stable viscosity control
- Shear-thinning viscosity
- Excellent suspension of pigments and actives
- Controlled alignment of special-effect pigments
- Thermostable viscosity raises apparent melting point and ensures cost-efficient use of UV filters
- Emulsion stabilisation [w/o and o/w]

Convenience

- Optimally pre-activated and dispersed organoclay
- Incorporates with medium-shear mixing
- Can be added at any convenient stage of manufacture
- Gives a high degree of formulating flexibility
- Provides highly reproducible results for multi-site production requirements

Acceptability

- Non-abrasive
- Provides smooth feel to skin
- Toxicologically safe ingredients

continued...

TECHNICAL DATA SHEET

ELEMENTIS

BENTONE® ULTIMATE ISD

INCORPORATION

BENTONE ULTIMATE ISD can be added at any convenient suitable stage during the manufacturing cycle.

BENTONE ULTIMATE additive is a very high viscosity, shear-thinning product. To ensure good homogeneous mixing is achieved, care must be taken to overcome the large viscosity differential existing between the BENTONE GEL and the other lower viscosity components. Choice of mixing equipment and the configuration within the mixing vessels are critical factors in developing the optimum performance of the BENTONE ULTIMATE. The use of high-shear mixing equipment is recommended.

BATCH PROCESSING

Single Phase Systems : Always add the BENTONE ULTIMATE, under shear, to a portion of the organic component or solvent with which it is most compatible. Mix until homogeneous before adding the other ingredients.

Multi-Phase Systems e.g. emulsions : Treat as the single phase but always ensure the BENTONE ULTIMATE additive is thoroughly mixed in before the emulsification stage.

Continuous Processing : The BENTONE ULTIMATE should be added to the oil phase at any convenient point that meets the above guidelines for batch processing. In multi-manifold systems, a flowable pre-mix of the BENTONE ULTIMATE with a compatible oil or solvent should be made in a side pot.

LEVELS OF USE

The level of use of the BENTONE ULTIMATE will depend on the formulation. Suspension and stability benefits can be acheived with 1—10% additions. Novel emulsification effects can be achieved, giving light feel and lower viscosities.

COMPATIBILITY

BENTONE ULTIMATE additives can contribute greatly to a formulation's stability by improving the compatibility of other ingredients. Care should be taken to determine the compatibility of the BENTONE ULTIMATE additive with the oils, actives or surfactant ingredients within a formulation. The wide range of grades available allows selection of the optimal carrier and organoclay for each system. The use of cationic materials should be avoided with BENTONE ULTIMATE additives.

HEALTH & SAFETY

Before using this product please consult our Safety Data Sheet (SDS) for information on safe handling and storage. The SDS can be found on the company website.

SHELF LIFE

BENTONE ULTIMATE LC has a minimum shelf life of 2 (two) years from date of manufacture.

STORAGE RECOMMENDATIONS

Store away from excessive heat.

QUALITY ASSURANCE

Quality and continuous improvement are paramount to our business. Facility manufacturing Bentone Gels® has established strong integrated management system and holds ISO 9001, ISO 14001, ISO 45001 and EFfCI GMP certifications.

SUSTAINABILITY

BENTONE ULTIMATE ISD is a raw material approved under the RSPO Mass Balance system.

CERTIFIED SUSTAINABLE PALM OIL™ RSPO MIXED Contributes to the production of certified sustainable palm oil. www.rspo.org

RSPO - 1106301

North America
Elementis
469 Old Trenton Road
East Windsor
NJ 08512, USA
T: +1 609 443 2500

Europe
Elementis PLC
The Bindery 5th Floor
51—53 Hatton Garden
London EC1N 8HN, UK
T: +44 207 067 2999

Asia
Deuchem (Shanghai) Chemical Co., Ltd.
99, Lianyang Road
Songjiang Industrial Zone
Shanghai, China 201613
T: +86 21 5774 0348

www.elementis.com