TECHNICAL DATA SHEET

ELEMENTIS

BENTONE GEL® VS-5 V HV

Non-animal origin rheological additive for cosmetics and toiletries

GENERAL INFORMATION

BENTONE GEL® VS-5 V HV is a specially prepared dispersion of an organically modified hectorite in volatile silicone (pentamer).

This grade is designed to impart rheological control and suspension to organic- and silicone-based cosmetics.

BENTONE GEL® VS-5 V HV is also particularly useful in emulsions and can be used in "cold process" systems. It provides thermostable viscosity control of the emulsion's oil phase, improves application properties, enhances skin-feel by masking greasy or tacky components and imparts a pleasant residual silkiness to the skin.

BENTONE GEL® VS-5 V HV is an alternative to traditional polymer or cellulose-based thickeners for stabilising emulsions.

INCI NAME

Cyclopentasiloxane, Disteardimonium Hectorite, Alcohol

CHEMICAL & PHYSICAL PROPERTIES

Colour / Form	Tan gel
Viscosity, Brookfield Helipath, TF spindle, Pa.s @ 2.5 rpm	1400 – 2600
% Ash Content	10.8 – 11.8
Infrared	To match standard
Microbial Content	Less than 100 cfu/g

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

APPLICATIONS

- Antiperspirants
- Eye makeup
- Emulsions
- Creams and lotions
- Suncare products

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...

BENTONE GEL® VS-5 V HV

INCORPORATION

BENTONE GEL® VS-5 V HV can be added at any convenient suitable stage during the manufacturing process.

BENTONE GEL® VS-5 V HV 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 GEL® additives. The use of medium- to high-shear mixing equipment is recommended.

BATCH PROCESSING

Single Phase Systems : Always add the BENTONE GEL®, 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 GEL® additive is thoroughly mixed in before the emulsification stage.

Continuous Processing : The BENTONE GEL® 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 GEL® with a compatible oil or solvent should be made in a side pot. Where only lower-shear mixing equipment is available, stir the BENTONE GEL® alone and then slowly add the most compatible component by portions, always ensuring the mixture remains homogeneous at each stage.

COMPATIBILITY

BENTONE GEL® 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 GEL® 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.

LEVEL OF USE

The level of use of the BENTONE GEL® will depend on the formulation. Suspension will be provided by 2.5-10.0% additions. In emulsions, thickening will occur in the oil phase only and emulsion viscosities will be influenced by 3-5% additions. Novel emulsification effects can be achieved, giving light feel and lower viscosities. In some water-in-oil systems a reduction of surfactant may be achievable by the use of BENTONE GEL® additive.

Higher levels of BENTONE GEL® will have a greater viscosity influence and thermostable viscosity in single phase systems may be achieved by 10-25% additions.

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 GEL® VS-5 V HV 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 GEL® VS-5 V HV is a raw material approved under the RSPO Mass Balance system.

MIXED
Contributes to the production of certified sustainable palm oil.
www.rspo.org

RSPO - 1106301

NOTE: The information herein is currently believed to be accurate. We do not guarantee its accuracy. Purchasers shall not rely on statements herein when purchasing any products. Purchasers should make their own investigations to determine if such products are suitable for a particular use. The products discussed are sold without warranty, express or implied, including a warranty of merchantability and fitness for use. Purchasers will be subject to a separate agreement which will not incorporate this document.
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