

BENTONE GEL® CPS V

Non-animal Origin Rheological Additive for Cosmetics and Toiletries

GENERAL INFORMATION

BENTONE GEL CPS V is an easy-to-process rheological additive consisting of an organically modified hectorite in cyclopentasiloxane.

BENTONE GEL CPS V can be used in a variety of formulations. In oil-based formulas, it suspends pigments and improves application. It can be cold processed. **BENTONE GEL CPS V** is particularly useful in emulsions where it provides thermostable viscosity control of the oil phase; enhances skin-feel by masking greasy or tacky components; and imparts a pleasant residual silkiness to the skin. **BENTONE GEL CPS V** is an alternative to traditional polymer or cellulose-based thickeners for stabilizing emulsions.

INCI NAME

Cyclopentasiloxane, Disteardimonium Hectorite, Propylene Carbonate

CHEMICAL & PHYSICAL PROPERTIES

Color / Form	Tan Gel
Viscosity, Brookfield Helipath, TF spindle, mm cps @ 2.5 rpm	0.25—2.50
% Ash Content	10.0 – 12.0

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

APPLICATIONS

- Antiperspirants
- Lipcare
- Eye Make-Up
- Lip Products
- Facial Make-up
- Emulsions
- Creams and Lotions
- Sun Care Products

KEY PROPERTIES

Rheological control

- Predictable, 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 stabilization [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

INCORPORATION

BENTONE GEL CPS V can be added at any convenient suitable stage during the manufacturing cycle. BENTONE GEL 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 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

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Batch Processing (continued)

- 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.

LEVELS 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.

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.

TOXICITY

Care is taken to ensure that the ingredients used in BENTONE GEL additives are not known to be

injurious to health in any way and have been toxicologically tested to ensure their safety. However, the BENTONE GEL additives have not been subjected to testing involving the use of animals within the last 10 years.

HEALTH AND 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.

STORAGE RECOMMENDATIONS

This product contains cyclopentasiloxane. Store away from excessive heat.

SHELF LIFE

BENTONE GEL CPS V has a shelf life of minimum 2 (two) years from date of manufacture.

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 CPS V is a raw material approved under the RSPO Mass Balance system.



RSPO - 1106301

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