

## BENTONE GEL<sup>®</sup> 1002 V

### Non-animal Origin Rheological Additive For Cosmetics And Toiletries

#### GENERAL INFORMATION

**BENTONE GEL 1002 V** is a specially prepared dispersion of an organically modified hectorite in an ultra pure D5 silicone (pentamer).

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

**BENTONE GEL 1002 V** 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 1002 V is an alternative to traditional polymer or cellulose-based thickeners for stabilising emulsions.

#### INCI NAME

Cyclopentasiloxane, Disteardimonium Hectorite, Propylene Carbonate

#### CHEMICAL & PHYSICAL PROPERTIES

Color / Form	Light buff
% Ash Content	10.8 – 11.8
Viscosity, Brookfield Helipath, TF spindle, Pa.s @ 2.5 rpm	1400 – 4000
Infrared	To Match Standard
Microbial Content	Max. 100 cfu/g
% Cyclotetrasiloxane	Less than 0.10%

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

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 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 1002 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.

*continued...*

## BENTONE GEL® 1002 V

### 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.

### 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.

*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.*

© Copyright 2020, Elementis Specialties, Inc. All rights reserved. Copying and/or downloading of this document or information therein for republication is not allowed unless prior written agreement is obtained from Elementis Specialties, Inc.

© Trademark of Elementis Specialties, Inc.

#### North America

Elementis  
469 Old Trenton Road  
East Windsor, NJ 08512, USA  
Tel.: +1 609 443 2500  
Fax: +1 609 443 2422

#### Europe

Elementis UK Ltd.  
c/o Elementis GmbH  
Stolberger Strasse 370  
50933 Cologne, Germany  
Tel.: +49 221 2923 2066  
Fax: +49 221 2923 2011

#### Asia

Deuchem (Shanghai) Chemical Co., Ltd.  
99, Lianyang Road  
Songjiang Industrial Zone  
Shanghai, China 201613  
Tel.: +86 21 5774 0348  
Fax: +86 21 5774 3563

### 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 1002 V** has a minimum shelf life of 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 1002 V** is a raw material approved under the RSPO Mass Balance system.

RSPO - 1106301

August 2020