

BENTONE® DY

Rheological Additive for Waterborne Systems

GENERAL INFORMATION

BENTONE DY additive is an organically modified powdered clay product specially designed for waterborne systems; primarily interior, decorative latex paints.

CHEMICAL & PHYSICAL PROPERTIES

Composition	organically modified and beneficiated smectite clay
Colour / Form	off-white, finely divided soft powder
Particle size	80 % < 125 μm (120#)
Bulk Density	ca. 0.65 g/cm ³

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

APPLICATIONS

- Adhesives
- Cementitious systems
- Decorative emulsion paints
- Plaster-type compounds
- Silicate paints
- Waterborne epoxy coatings

KEY PROPERTIES

Rheological properties

- efficient low-shear thickener
- imparts high in-can viscosity
- imparts reproducible thixotropic flow
- develops stable viscosity without post-thickening

Application performance

- prevents hard settlement of pigments/fillers
- reduces phase separation
- provides excellent suspension
- improves storage stability
- maintains open-time

System stability

- compatible with synthetic resin dispersions
- compatible with non-ionic & anionic wetting agents
- compatible with all other classes of thickeners
- compatible with coalescents

Easy to use

- can be incorporated as powder or as an aqueous pre-gel
- easier to disperse than typical clay-based products

INCORPORATION

BENTONE DY additive is very easy to process. No increased temperature is required. It can be used either as a pre-gel or powder. A pre-gel can be prepared as follows.

- Add **BENTONE DY** gradually, with stirring, to a vessel containing only water.
- Mix at highest practicable speed for 10 minutes.

In this way, 3 % to 8 % pre-gels can be made. Typically a 5 % pre-gel is recommended. This can then be added to the formulation at any convenient stage, including post addition to the complete system. As the **BENTONE DY** disperses easily, high shear forces are not required during post-addition of the gel. If the pre-gel is to be stored, a biocide should be incorporated.

BENTONE DY can also be added as a powder at the start of the mill-base. It should be allowed to wet-out and swell in water before the other ingredients are added.

For highly-filled systems, the pre-gel method with later addition is recommended. This will avoid problems of a too thick or "heavy" mill-base.

LEVELS OF USE

Typical addition levels are 0.3 - 1.5 % **BENTONE DY** additive by weight of total formulation, depending upon the degree of suspension, the rheological properties or viscosity required. For standard decorative latex paints, 0.5 % is a good starting point.

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.

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BENTONE[®] DY

STORAGE RECOMMENDATIONS

Store in a cool, dry location. **BENTONE DY** will absorb atmospheric moisture if stored under high humidity conditions.

SHELF LIFE

BENTONE DY rheological additive has a shelf life of 4 (four) years from date of manufacture.

QUALITY ASSURANCE

Quality system at the site manufacturing this product complies with and is certified to ISO 9001 quality standards.

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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