

Rheological Additive for Waterborne Systems

GENERAL INFORMATION

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

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

APPLICATIONS

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

KEY PROPERTIES

BENTONE® DY CE rheological additive

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

BENTONE® DY CE rheological additive has been specially sterilized to minimize microbial contamination.

INCORPORATION

BENTONE® DY CE 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 CE 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 CE 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 CE 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 CE 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.

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HEALTH AND SAFETY DATA

Before using this product please consult our Material Safety Data Sheet (MSDS) for information on safe handling and storage. MSDS's can be found on the company website at www.elementis-specialties.com

STORAGE RECOMMENDATIONS

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

SHELF LIFE

BENTONE® DY CE rheological additive has a shelf life of 2 (two) years from date of manufacture.

QUALITY ASSURANCE

Since 1992 the company is a holder of the ISO 9001 / ISO 9002 certificates, which guarantees that all operations are conducted according to the stipulated standards.

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