ELEMENTIS
A global specialty chemicals company

Enhanced Performance Through Applied Innovation

BENTONE SD®-1

Rheological Additive for Non-Polar to Medium-Polarity Aliphatic and other Solvent Systems - Very Easily Dispersible

GENERAL INFORMATION

BENTONE SD-1 rheological additive is an organic derivative of a bentonite clay. It is a very easily dispersible additive for systems containing primarily aliphatic and other non-polar to medium-polarity solvents. **BENTONE SD-1** can be added at any point in the paint manufacturing process and can be used for post-correction.

It provides viscosity increase, reduces sagging of coatings on vertical surfaces and prevents settling of pigments and fillers.

CHEMICAL & PHYSICAL PROPERTIES

Composition	organic derivative of a bentonite clay
Color / Form	very light cream, finely divided powder
Density	1.47 g/cm^3

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

APPLICATIONS

Coating systems containing common aliphatic solvents e.g.:

- Anti-corrosive paints
- Bituminous coatings
- Decorative alkyd paints
- Do-it-yourself paints
- Printing inks
- Primers, fillers, undercoats
- Traffic paints
- Wood stains

KEY PROPERTIES

- Is a cost-effective replacement for conventional organoclay additives
- Disperses very easily, even under low shear conditions
- Provides stable viscosity build, controls sag and pigment settling
- Eliminates the need for pregels
- Needs no chemical activator
- Can be added as a powder to the millbase either before or after the pigment dispersion or during letdown.

INCORPORATION

BENTONE SD-1 additive is a readily dispersible organoclay for non-polar to medium-polarity organic applications. Incorporation at any point in the manufacturing process is possible using all normal paint-making equipment. This rheological additive can be incorporated in the pigment grind under high shear and under low shear in the letdown tank. A chemical activator is not required to disperse **BENTONE SD-1** in conventional solvent containing paints.

BENTONE SD-1 can be incorporated in the pigment grind under high shear without sensitivity to overshear.

BENTONE SD-1 can also be incorporated under mixing rather than grinding conditions. Its dispersion does, however, require some minimal shear (minimum tip speed 4 m/s when a dissolver is used). The paint to which it is to be added should have good movement in the letdown tank as **BENTONE SD-1** additive is sifted in. Sufficient time for full activation should be allowed. The amount of time required will depend upon the size and configuration of the tank, the type and speed of agitator in use and the viscosity and solids of the system.

BENTONE SD-1 does not disperse efficiently at low shear in cold systems (the same holds true for conventional organoclays)

The best rheological performance under letdown conditions is achieved when the system temperature is between 21 °C (70 °F) and 35 °C (95 °F). When used in the pigment grind, it is not sensitive to high temperatures and no minimum temperature is required.

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LEVELS OF USE

In the variety of systems where **BENTONE SD-1** can be used, use levels are typically 0.2 % - 2.0 % by weight of the system, with the level dependent upon the degree of thickening, sag and pigment settling control desired.
When evaluating **BENTONE SD-1** additive as a replacement for conventional organoclays, a good starting point is a level equal to that of BENTONE 34 additive.
Because **BENTONE SD-1** additive is effective in systems, rather than in solvents alone, it is not suitable for lubricating greases and similar binderless products.

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

Store in a cool, dry location.

SHELF LIFE

BENTONE SD-1 has a shelf life of 4 (four) 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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