

Rheological additives

RT-3709

Features and Advantages:

Synthetic bentonite is a layered silicate produced through a synthetic process; it possesses the same chemical crystal structure as natural bentonite. Synthetic bentonite can undergo complete hydration, swelling and exfoliation in water; when its concentration in water is 2 per cent or higher, it forms a transparent gel with high thixotropy.

Product Specifications:

Appearance	White powder
Bulk Density	1200 – 1400 kg • m ⁻³
pH (2% aqueous solution)	9 – 11
Particle Size	95% less than 250 micrometers
Chemical Composition	Synthetic (modified) flake silicate

Application fields:

Synthetic bentonite exhibits exceptional thixotropy in the vast majority of water-based formulation systems, providing shear-thinning viscosity and storage rheological stability across a wide temperature range; at the same time, synthetic bentonite itself is capable of inhibiting the growth of bacteria and enzymes. Consequently, as a highly effective rheological additive and suspension stabiliser, it is ideally suited for preventing sedimentation, increasing viscosity and thickening, and controlling rheology in the vast majority of water-based formulation systems.

Recommended applications:

Water-based coatings, cosmetics, detergents, water-based adhesives, building materials (plaster, ready-mixed plaster), oilfields

Recommended dosage:

- 1.It is strongly recommended to first prepare a pre-gel with a solids content of 2–5 per cent before adding it to the water-based formulation system. When preparing the pre-gel, high-shear dispersion methods must be employed, the pH must be maintained between 6 and 11, and deionised water (preferably warm) must be used.
- 2.Generally 0.2–2 per cent by mass of the total water-based formulation system; please test to determine the optimum addition rate prior to use.

Storage:

Synthetically produced bentonite is hygroscopic and should be stored in a dry environment, although absorption of moisture does not affect the product' s performance.