

Rheological additives

EP01

Features and Advantages:

An organically modified synthetic flake silicate for use in water-based systems, which improves low-shear rheology.

Product Specifications:

Appearance	White powder
Bulk Density	1,000 kg/m ³
pH (2% aqueous solution)	10
Moisture Content	Maximum 10%
Chemical Composition	Synthetic (modified) flake silicate

Application fields:

Paint Industry

Properties and Advantages

EP01 increases viscosity in the low-shear range whilst having minimal effect in the high-shear range, thereby improving processability and storage stability. It is highly effective in preventing the settling of pigments, fillers, matting agents or other solid substances in water-based paint systems. EP01 is particularly effective in formulations with strongly acidic or strongly alkaline pH values, as well as in systems containing water-soluble organic solvents or high levels of dissolved salts.

Recommended Applications

Architectural coatings, general industrial coatings, floor coatings

Recommended Dosage

0.1–2.0% of the total formulation (as supplied). The above recommended dosage is provided for reference only. The optimum dosage should be confirmed through relevant application series testing.

Addition and Processing Instructions

To ensure optimal distribution, efficacy and reproducibility in applications, EP01 must be thoroughly hydrated in water at low ionic concentration ($20\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$). Add EP01 gently whilst stirring continuously to achieve dispersion. Once no undispersed particles are observed in the dispersion, processing may continue by adding all other formulation components to the EP01 dispersion.

Special Notes

Concentrations above 2 per cent result in the formation of a highly viscous gel, which is difficult to incorporate into formulations. This effect can be mitigated by using water-soluble organic solvents, such as low-molecular-weight polyethylene glycol.

Domestic, industrial and institutional applications

Features and benefits

EP01 is a rheological additive that produces a thixotropic effect. It is widely used as an anti-settling agent in water-based systems to prevent the settling of abrasives and other particles without causing excessive thickening. Cleaning products containing EP01 are easy to use and suitable for spray application. The use of this additive improves adhesion to vertical surfaces and extends contact time, thereby enhancing cleaning performance. EP01 is particularly suitable for water-based cleaning and care products with a pH range of < 2 to 12.

Recommended Applications

Care products, automotive cleaners, household cleaners, kitchen cleaners, damp area cleaners, laundry detergents

Recommended Dosage

0.1–3.0% of the additive (as supplied) in the total formulation. The above recommended dosage is provided for reference only. The optimum dosage should be confirmed through relevant application series testing.

Addition and Processing Instructions

To ensure optimal distribution, efficacy and reproducibility in the application, EP01 must be fully hydrated in water at low ionic concentration ($20^{\circ}\text{C} \pm 5^{\circ}\text{C}$). After continuous high-speed stirring for at least 10 minutes, gently add EP01 whilst continuing to stir. After a few minutes, the viscosity of the premix will increase rapidly. At this point, it is recommended to switch off the stirrer and allow the dispersion to mature for 15–20 minutes. Subsequently, all other ingredients in the formulation may be added to the EP01 dispersion.

Packing:

Net weight: 25 kg.

Storage:

As the product is hygroscopic, it should be transported and stored in its original, unopened container in a dry environment, at a temperature between 0°C and 30°C .