LAPONITE-EP

Rheology additive based on an organically modified, synthetic phyllosilicate for aqueous systems to improve the rheological properties in the low shear range.

Product data

Composition
Synthetic (modified) phyllosilicate

Typical properties
The values indicated in this data sheet describe typical properties and do not constitute specification limits.

Bulk density:	1000 kg/m^3
pH value (2 % in H_2O):	10
Moisture content:	max. 10 %
Appearance:	free-flowing, white powder

Storage and transportation
LAPONITE-EP is hygroscopic and should be transported and stored dry in the unopened original container at temperatures between 0 °C and 30 °C.

Applications

Coatings industry

Special features and benefits
LAPONITE-EP increases viscosity in the low shear range with a low impact in the high shear range. It improves processability and storage stability. It is also highly effective in preventing the settling of pigments, extenders, matting agents, or other solids used in aqueous coating systems. LAPONITE-EP is particularly effective in formulations with highly acidic or highly alkaline pH values, as well as in systems that contain higher levels of water-soluble organic solvents or dissolved salts.

Recommended use

Architectural coatings	■
General industrial coatings	■
Floor coatings	□

■ especially recommended □ recommended

Recommended levels
0.1–2.0 % additive (as supplied) based upon total formulation.

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

Incorporation and processing instructions
To ensure optimum distribution and the best possible effectiveness and reproducibility in applications, LAPONITE-EP must be fully hydrated in water with a low ion concentration (20 °C ± 5 °C). Therefore, LAPONITE-EP is gently added to the water and dispersed whilst continuously stirring. The dispersion can be used as soon as no more undispersed particles are visible. All other formulation components should then be added to the LAPONITE-EP dispersion.

Special note
Highly viscous gels are formed at concentrations above 2 %, which can make it difficult to incorporate them into a formulation. To counteract this effect, it is possible to use water-soluble organic solvents such as polyethylene glycols with a low molecular weight.

Household, industrial and institutional applications

Special features and benefits
LAPONITE-EP is a rheology additive that produces thixotropic flow behavior. It is used in aqueous systems and can be used universally as an anti-settling agent to prevent the settling of abrasives and other particles without excessive thickening. Cleaners with LAPONITE-EP are easy to use and can be applied by spraying. Use of the additive improves adhesion to vertical surfaces, while the cleaning effect is increased by the longer contact time. LAPONITE-EP is particularly suitable for aqueous cleaning and care products in the pH range between < 2 and 12.

Recommended use

Care products	■
Vehicle cleaners	■
Cleaners for living spaces	■
Cleaners for the kitchen	■
Cleaners for wet rooms	■
Detergents	□

■ especially recommended □ recommended

Recommended levels
0.1–3.0 % additive (as supplied) based upon total formulation.

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

Incorporation and processing instructions

To ensure optimum distribution and the best possible effectiveness and reproducibility in the applications, LAPONITE-EP must be fully hydrated in water with a low ion concentration (20 °C ± 5 °C). Therefore, LAPONITE-EP is gently added to the water whilst continuously stirring at high speed and stirred for at least 10 minutes. After a few minutes, the viscosity of the premix increases rapidly. At this point, it is recommended to turn off the stirrer and allow the dispersion to mature for 15–20 minutes. Subsequently, all other formulation components can be added to the LAPONITE-EP dispersion.

Special note

LAPONITE-EP gels faster in water than other LAPONITE grades.

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