

CLAYTONE-MPQ

Highly efficient rheology additive based on an organophilic phyllosilicate (free of crystalline silica) to generate a thixotropic flow behavior in a particularly wide range of applications from low- to high-polar solvent-borne systems.

Product data

Composition

Organophilic phyllosilicate

Typical properties

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

Bulk density: 341–434 kg/m³

Moisture content: max. 3 %

Delivery form: powder

Storage and transportation

CLAYTONE-MPQ should be transported and stored dry in the unopened original container at temperatures under 50 °C.

Special note

CLAYTONE-MPQ is free of crystalline silica (quartz).

Applications

Coatings industry

Special features and benefits

- Rheological effect:
 - Viscosity increase in the low shear range
 - Very little impact on viscosity in the high shear range
- Improvement in:
 - Sag resistance (also in 2-pack epoxy systems after storage)
 - Anti-settling properties
 - Storage stability
- Systems:
 - Solvent-borne
 - Low- to high-polar (e.g. alkyd, polyurethane, or epoxy coatings)
 - Also suitable for aromatic-free systems
- Use of polar activators not necessary
- Free of crystalline silica

Recommended use

Marine and protective coatings	<input checked="" type="checkbox"/>
General industrial coatings	<input checked="" type="checkbox"/>
Architectural coatings	<input type="checkbox"/>

especially recommended recommended

Recommended levels

0.3–3 % additive (as supplied) based on the 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

CLAYTONE-MPQ can be incorporated in two different ways:

Incorporation as a powder:

The additive is incorporated while stirring and preferably dispersed into the millbase using at least medium shear forces for a minimum of 10 minutes. It is recommended not to add CLAYTONE-MPQ directly as the next item after the incorporation of a wetting and dispersing additive, but after the addition of pigments and fillers before dispersion, for example.

Incorporation as a pre-gel:

To produce a pre-gel, the following suggested formulation can be used:

- 85–87 wt. % solvent
- 10 wt. % CLAYTONE-MPQ
- 5–3 wt. % wetting and dispersing additive (if required)

CLAYTONE-MPQ is added to the solvent while stirring and dissolved at the highest possible shear forces. The wetting and dispersing additive can also be used to reduce the pre-gel viscosity. If sufficient gel formation is not achieved, a polar activator must be added.

The use of a polar activator is not mandatory in both cases, but can increase the effectiveness.

Possible polar activators are:

Propylene carbonate/H₂O (95:5) 25–40 % based on CLAYTONE-MPQ

Ethanol/H₂O (95:5) 40–60 % based on CLAYTONE-MPQ

Methanol/H₂O (95:5) 25–40 % based on CLAYTONE-MPQ



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