

GARAMITE-1210

Powdered rheology additive for solvent-based and solvent-free systems to increase storage duration and sagging resistance.

Product data

Composition

Organophilic phyllosilicates

Typical properties

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

Loose bulk density: 56–194 kg/m³

Delivery form: powder

Storage and transportation

A temperature of 40 °C should not be exceeded during storage and transport.

Applications

Coatings industry

Special features and benefits

GARAMITE-1210 is a rheology additive that can be used in all solvent-based and solvent-free coating systems due to its very wide compatibility.

GARAMITE-1210 has the following features and benefits:

- Pseudoplastic flow
- Improves sagging resistance
- Improves anti-settling properties
- Supports the alignment of effect pigments

Due to its high bulk density, it is easy to handle and is not sensitive to shear forces.

Recommended use

GARAMITE-1210 is recommended for the following applications:

Protective coatings	<input checked="" type="checkbox"/>
Industrial coatings	<input type="checkbox"/>
Architectural coatings	<input type="checkbox"/>
Powder coatings	<input checked="" type="checkbox"/>

especially recommended recommended

Recommended levels

0.3–2 % 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

The additive can be incorporated in various ways. GARAMITE-1210 is either dispersed directly in the millbase or added as a 10 to 15 % paste in solvent to the millbase or letdown. It should be incorporated into the solvent using adequate shear forces. When adding during the grinding process, it should be pre-dispersed in the binder and solvent with moderate shear forces before adding the pigments and fillers. The effect of GARAMITE-1210 can be increased by adding a booster or small quantities of a polar solvent or water.

Powder coatings**Special features and benefits**

GARAMITE-1210 is a rheology additive that can be used to increase melt viscosity in powder coatings. Even at low dosage, the melt viscosity is increased during extrusion and cross-linking reaction. The resulting coating will maintain good flow properties despite its increased viscosity. The combination of different morphological structures in the mineral component results in easy dispersibility with high efficiency. GARAMITE-1210 is particularly recommended for polyester-based resin systems. Higher dosages result in a fine texture finish and a reduction in the gloss level. GARAMITE-1210 can be used to modify the surface structure in finely textured systems. The increased melt viscosity improves edge coverage. This results in better corrosion resistance.

Recommended use

The additive is recommended for powder coatings based on epoxy, polyester, polyurethane and acrylate resins as well as polyester/epoxy combinations. It is particularly recommended in polyester-based binders.

Recommended levels

0.5–4 % 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

The additive should be mixed with resin, curing agents, pigments and other raw materials in a high-speed mixer and then extruded.

Thermosets

Special features and benefits

GARAMITE-1210 is a solid rheology additive based on a composition of organically modified phyllosilicates. The combination of different morphological structures in the mineral component results in particularly easy dispersibility with high efficiency. GARAMITE-1210 delivers the following advantages over conventional rheology additives in various resins based on unsaturated polyester and vinyl ester resins:

- Allows adjustment of low to higher viscosities and various layer thicknesses
- Prevents filler settling
- Systems with GARAMITE have very good shear-thinning flow properties
- Higher efficiency or lower application volume, especially in combination with booster additives
- Reduced dust generation in production compared to fumed silica
- Easy to incorporate as extremely low shear forces are required. The processing time can be significantly reduced compared to conventional fumed silica.
- No activation by heat or activators required
- Less storage area due to higher bulk density compared to fumed silica

Recommended levels

0.5–5 % additive (as supplied) based on the resin content.

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

Incorporation and processing instructions

GARAMITE-1210 can be incorporated directly into the resin.

A premixture in styrene is recommended to achieve full efficacy in UP/VE resins (dosages 0.5–2 %). For this purpose, 8 to 12 % GARAMITE-1210 must be incorporated into styrene. At this concentration, the mixture can still be pumped and will still flow and can be later dosed to the resin. The use of deaerators in such resins is advisable to reduce the quantity of air bubbles.

Content in UP/VE resins can be reduced by combining GARAMITE-1210 with booster additives, such as RHEOBYK-R 605. The combination also allows for the transition from a pseudoplastic to a thixotropic rheology profile and for the reduction of thixotropic drift over time.



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This issue replaces all previous versions.