RHEOBYK-100

Powdered rheology additive for non-polar to medium-polarity solvent-borne systems.

Product Data

Composition
Castor oil derivative

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

Particle size: 100 % < 32 µm
Density (20 °C): 1.02 g/cm³
Supplied as: White powder

Applications

Coatings Industry

Special Features and Benefits
RHEOBYK-100 is suitable for many systems based on aliphatic through to aromatic solvents. It can therefore be used in protective coatings, architectural coatings and general industrial coatings. RHEOBYK-100 is also particularly suitable for use in thick-layered epoxy and vinyl resin systems.

In brush paints, RHEOBYK-100 generates a "buttery" coating resistance and a good balance between anti-sagging and leveling as well as a good anti-settling behavior.

Recommended Use

Protective coatings	■
Architectural coatings	■
General industrial coatings	■

■ especially recommended □ recommended

Recommended Levels
0.2-0.8 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

Incorporation and Processing Instructions
RHEOBYK-100 should be added at the start of the dispersion process before the pigments and fillers; it is preferably pre-dispersed in a solvent/binder for approximately 5 minutes and then mixed in.
For the optimum incorporation of RHEOBYK-100 in the coating system, a lower and an upper processing temperature must be observed.

The temperature ranges are:
50 °C-80 °C for systems based on aliphatic non-polar solvents and
35 °C-55 °C for systems based on aromatics as well as medium-polarity (ester) systems.

If the upper temperature limit is exceeded, gel-like particles could be created during the cooling phase. The formation of such particles can be prevented by ensuring a slow continuous cooling down to 45 °C while stirring.

Within the specified temperature ranges, a dispersion of RHEOBYK-100 at as high as possible shear forces will lead to a pronounced, immediate rheological effect.

Special Note
All castor oil-based rheology additives are exceptionally sensitive to solvents and temperatures.
It is therefore essential that the temperature limits for specific solvents are observed during incorporation.
A slow cooling of the finished batch is recommended. The addition of cold solvents in let-downs should also be avoided.

Adhesives and Sealants

Special Features and Benefits

RHEOBYK-100 is an effective rheology additive for use in epoxy and single-component, silane-modified pre-polymer systems. RHEOBYK-100 achieves a high stability with a simultaneously easier processing.

RHEOBYK-100 demonstrates its effect by means of heat activation at 40-80 °C, and increases the viscosity of the systems in the low shear range, whereas there is minimal impact on viscosity at high shear. This guarantees a simple processing and application of adhesive and sealant systems.

Recommended Levels

2-7 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

Incorporation and Processing Instructions

Use in single-component silane-modified polymer adhesives and sealants:
RHEOBYK-100 is added to the binder, homogenized and activated by temperature (40-80 °C).

Incorporation is typically in a dissolver with a planetary mixer. The addition of other formulation components (plasticizers, bonding agents, etc.) follows after this.

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