

RHEOBYK-7650

Solid, non-dusting, biocide-, and VOC-free associative thickener (HEUR) for aqueous systems that generates a slightly pseudoplastic flow behavior.

Product data

Composition

Polyurethane

Biocide-free
VOC-free

Typical properties

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

Density (20 °C): 1.20 g/cm³
Bulk density: 0.3–0.5 kg/m³
Active substance: 100 %
Melting point: 59 °C
Color: off-white
Delivery form: flakes

Storage and transportation

Storage at max. 35 °C.

Applications

Coatings industry

Special features and benefits

RHEOBYK-7650 increases the viscosity in a variety of aqueous systems in the low to medium shear range with an extremely low impact in the high shear range. This optimizes the storage stability and results in an excellent balance between flowability and sag resistance. Combining RHEOBYK-7650 with rheology additives that are effective in the high shear range, such as RHEOBYK-7690, enables excellent processability. RHEOBYK-7650 has no negative effect on gloss or color acceptance.

The additive is supplied as flakes, is non-dusting, and is safe to handle. The solid delivery form means there is no need to add biocides to the additive to prevent microbial infestation.

It is not necessary to specifically adjust the pH value or control the temperature during incorporation.

Recommended use

RHEOBYK-7650 is preferably used in emulsion paints and coatings that are based on acrylate, styrene acrylate, and polyvinyl acetate binders, as well as in PU and alkyd emulsions and epoxy dispersions.

Architectural coatings	■
Wood and furniture coatings	■
Industrial coatings	■
Marine and protective coatings	■
Floor coatings	■

■ especially recommended □ recommended

Recommended levels

0.05–0.3 % additive (as supplied) based upon the total formulation, depending on the properties of the formulation to be achieved.

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

Incorporation and processing instructions

Incorporation while stirring ensures optimum distribution and the best possible effectiveness and reproducibility in applications. RHEOBYK-7650 is perfectly suitable for adding to the millbase and improving dispersibility. It can also be used as a post-additive. This requires a slightly longer incorporation time (no high shear forces) compared with conventional liquid polyurethane thickeners. Furthermore, a 10 % pregel solution is easy to produce and enables an optimized post-addition.

When used in clearcoats, it is recommended that the additive is stirred into water at the start of the manufacturing process, and that further formulation components, such as binders, etc., are then added while stirring.

Adhesives and sealants**Special features and benefits**

RHEOBYK-7650 increases the viscosity in the low to medium shear range with an extremely low impact in the high shear range. This optimizes the storage stability and results in an excellent balance between flowability and sag resistance. Combining RHEOBYK-7650 with rheology additives that are effective in the high shear range, such as RHEOBYK-7690, enables excellent processability.

The additive is supplied as flakes, is non-dusting, and is safe to handle. The solid delivery form means there is no need to add biocides to the additive to prevent microbial infestation.

It is not necessary to specifically adjust the pH value or control the temperature during incorporation.

Recommended use

RHEOBYK-7650 is suitable for use in highly polar and aqueous binder systems.

Recommended levels

0.05–0.5 % additive (as supplied) based upon the total formulation, depending on the properties of the formulation to be achieved.

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

Incorporation and processing instructions

Incorporation while stirring ensures optimum distribution and the best possible effectiveness and reproducibility in applications. RHEOBYK-7650 can also be used as a post-additive. This requires a slightly longer incorporation time (no high shear forces) compared with conventional liquid polyurethane thickeners. Furthermore, a 10 % pregel solution is easy to produce and enables an optimized post-addition.

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This issue replaces all previous versions.