

Rheological additives

RT-3707

Features and Advantages:

Used in water-based systems to improve low-shear rheological properties; in particular, it enhances the orientation of effect pigments.

Product Specifications:

Appearance	White powder
Bulk Density	1,000 kg/m ³
pH (2% aqueous solution)	10
Moisture Content	Maximum 10%
Chemical Composition	Synthetic (modified) flake silicate

Application fields:

Paint Industry

Product Characteristics and Advantages

- Increases low-shear viscosity whilst having minimal effect on high-shear viscosity
- Prevents coating penetration during wet-on-wet processes
- Enhances ease of application
- Improves storage stability by preventing the settling of pigments, fillers, matting agents and other solid materials
- Rapid structural recovery after application, achieving ideal orientation of effect pigments, particularly in (automotive) base coats and topcoats
- Improved tolerance to water quality
- A versatile additive that is insensitive to pH
- Also suitable for systems containing higher levels of co-solvents or soluble salts

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; For more information, please visit: <https://www.rk-chem.com>

- Can be used in combination with organic rheological additives to optimise the relevant rheological properties

Recommended Applications

Building paints, original equipment automotive paints, automotive refinish paints, general industrial coatings, wood and furniture coatings

Recommended Dosage

In automotive paint formulations, typically added at 0.1–0.7 % of the total formulation (as supplied). Depending on the characteristics of the formulation, the dosage may also range from 0.1–2 % (as supplied).

The above recommended addition levels are for guidance only; the optimum addition level must be determined through a series of tests.

Method of Addition and Processing Guidelines

To ensure optimal dispersion, performance and reproducibility in applications, RT-3707 should be thoroughly dispersed in water with low ionic concentration (at a controlled temperature of 20 °C ± 5 °C). When using RT-3707, it is recommended to prepare a 2–5 % dispersion in deionised water. During preparation, RT-3707 should be added slowly to the water whilst stirring. The dispersion may only be used once it is fully dissolved and free of any undissolved particles. For concentrations up to 5 %, it is recommended to add a low-molecular-weight polyethylene glycol to the solution after RT-3707 has completely dissolved. A verified ratio is 1:1 of polyethylene glycol to RT-3707. To achieve optimal results, the rheological additive should be thoroughly mixed into the coating system before adding the effect pigments.

Special Note

Semi-finished products containing RT-3707 should be used before an irreversible gel structure forms, as once this structure has formed, it cannot be reliquified even by shear.

Packing:

Net weight: 25 kg.

Storage:

As this product is hygroscopic, it should be transported and stored in its unopened original container in a dry environment at temperatures between 0 °C and 30 °C.