

Rheological additives

RD02

Features and Advantages:

A synthetic flake silicate for use in water-based systems, which improves low-shear rheology.

Product Specifications:

Appearance	Free-flowing 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

Properties and Advantages

RD02 increases viscosity in the low-shear range whilst having minimal effect in the high-shear range, thereby improving processability and storage stability. It is highly effective in preventing the settling of pigments, fillers, matting agents or other solid substances in water-based paint systems.

Recommended Applications

Architectural coatings, wood and furniture coatings, general industrial coatings

Recommended Dosage

0.1–2.0% of the total formulation (as supplied). The above recommended dosage is provided for reference only. The optimum dosage should be confirmed through relevant application series testing.

Addition and Processing Instructions

To ensure optimum distribution, efficacy and reproducibility in applications, RD02 must be fully hydrated in water at low ionic concentration ($20\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$). Gently add RD02 whilst stirring continuously at high speed to achieve dispersion. Processing may continue once no undispersed particles are observed in the dispersion. For optimum processability, it is recommended to prepare a dispersion with a maximum RD02 solid content of 10% in water.

Special Notes

RD02 is a synthetic flake silicate which, upon hydration and swelling, forms a translucent, colourless, gel-like liquid dispersion, i.e. a sol. Even at a solid concentration of 10 per cent in water, it remains free-flowing for up to 24 hours.

Multicolour Coatings (MCP)**Properties and Benefits**

RD02 is a synthetic flake silicate and is highly recommended for use in multicolour coatings (MCP). Multicolour coatings are specially formulated water-based coatings in which different colours coexist in the form of completely separated droplets. RD02 is particularly recommended for use in the formulation of white or transparent base coats.

Recommended Dosage

4.0–6.0% of the additive dispersion (a 7% solution in deionised water) in the base coat. The above recommended dosage is provided for reference only. The optimum dosage should be confirmed through relevant application series testing.

Addition and Processing Instructions

To ensure optimum distribution, efficacy and reproducibility in applications, RD02 must be fully hydrated in water with a low ionic concentration ($20\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$). Add RD02 gently whilst under continuous high-speed agitation to achieve dispersion. Processing may continue once the dispersion is clear and no undispersed particles are observed. For optimum processability, it is recommended to prepare a dispersion with a maximum RD02 solid content of 10% in water.

Special Note

RD02 is a synthetic flake silicate which, upon hydration and swelling, forms a translucent, colourless, gel-like liquid dispersion, i.e. a sol. Even at a solid concentration of 10 per cent in water, it remains free-flowing for up to 24 hours.

Construction Chemicals

Special Properties and Advantages

The use of RD02 imparts shear-thinning rheological properties and, depending on the dosage, allows the thixotropic effect of construction chemicals to be adjusted to that of a pseudoplastic fluid. This additive is particularly suitable for spray applications, such as formulations for building materials—including fillers—that are bound in the form of a dispersion, as it improves the system's storage stability and resistance to settling. RD02 can also be used as a stabiliser for anionic bitumen emulsions, increasing the viscosity of the dispersion medium to stabilise the emulsion.

Recommended Applications

Mineral-based systems, organic associative water-based resin systems

Recommended Dosage

0.5–5.0% of the additive dispersion (10% aqueous solution) in the total formulation. The above recommended dosages are provided for reference only. The optimum dosage should be confirmed through relevant application series testing.

Addition and Processing Instructions

To ensure optimal distribution, efficacy and reproducibility in applications, RD02 must be fully hydrated in water at low ionic concentration ($20\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$). For optimum processability, it is recommended to prepare an aqueous solution of RD02 with a solid content of up to 10 per cent. This also allows it to be used as a post-additive during subsequent processing. Direct addition in powder form is not recommended, particularly for mineral resin systems (pre-mixed dry mortars).

Adhesives and Sealants

Properties and Benefits

RD02 increases viscosity within a low shear range whilst having minimal effect at high shear, thereby improving processability and storage stability. It is highly effective in preventing the settling of fillers, pigments, matting agents or other solid substances in water-based coating systems.

Recommended Dosage

0.1–2.0% of the total formulation (as supplied). The above recommended dosage is provided for reference only. The optimum dosage should be confirmed through a series of application tests.

Addition and Processing Instructions

To ensure optimal distribution, efficacy and reproducibility in the application, RD02 must be fully hydrated in water at low ionic concentration ($20\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$). Add RD02 gently whilst stirring continuously at high speed to achieve dispersion. Processing may continue once the dispersion is clear and no undispersed particles are observed. To achieve optimum processability, it is recommended to prepare a dispersion with a maximum RD02 solid content of 10% in water.

Special Notes

RD02 is a synthetic flake silicate which, upon hydration and swelling, forms a translucent, colourless, gel-like liquid dispersion, i.e. a sol. Even at a solid concentration of 10% in water, it remains free-flowing for up to 24 hours.

Packing:

Net weight 25 kg

Storage:

As the product is hygroscopic, it should be transported and stored in its original, unopened container in a dry environment, at a temperature between $0\text{ }^{\circ}\text{C}$ and $30\text{ }^{\circ}\text{C}$