LAPONITE-RDS

Rheology additive based on synthetic phyllosilicate for aqueous systems to improve the rheological properties in the low shear range.

Product data

Composition
Synthetic (modified) phyllosilicate

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

Bulk density:	1000 kg/m^3
pH value (2 % in H_2O):	10
Moisture content:	max. 10 %
Appearance:	free-flowing, white powder

Storage and transportation
LAPONITE-RDS is hygroscopic and should be transported and stored dry in the unopened original container at temperatures between 0 °C and 30 °C.

Applications

Coatings industry

Special features and benefits
LAPONITE-RDS increases viscosity in the low shear range with a low impact in the high shear range. It improves processability and storage stability. It is also highly effective in preventing the settling of pigments, extenders, matting agents, or other solids used in aqueous coating systems.

Recommended use

Architectural coatings	■
Wood and furniture coatings	■
General industrial coatings	□

■ especially recommended □ recommended

Recommended levels
0.1–2.0 % additive (as supplied) based upon 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
To ensure optimum distribution and the best possible effectiveness and reproducibility in applications, LAPONITE-RDS must be fully hydrated in water with a low ion concentration (20 °C ± 5 °C). Therefore, LAPONITE-RDS is gently added to the water and dispersed whilst continuously stirring at high speed. The dispersion can be used as soon as it is clear and no undispersed particles are visible. For optimum processibility, it is recommended to prepare a dispersion of LAPONITE-RDS with a solids content of up to 10 % in water.

Special note
LAPONITE-RDS is a synthetic layered silicate. It hydrates and swells in water to provide translucent and colorless colloidal liquid dispersions known as sols. At a solids concentration of 10 % in water, these will remain free flowing for up to 24 hours.

Multi-Color-Paints (MCP)

Special features and benefits
LAPONITE-RDS is a synthetic phyllosilicate that is highly recommended for formulating Multi-Color-Paints (MCP). Multi-Color-Paints are specially designed aqueous paints in which different colors co-exist as fully separated paint droplets. LAPONITE-RDS is highly recommended for formulating the white or transparent base paints.

Recommended levels
4.0–6.0 % additive dispersion (7 % in demineralized water) based upon base paint.

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

Incorporation and processing instructions
To ensure optimum distribution and the best possible effectiveness and reproducibility in applications, LAPONITE-RDS must be fully hydrated in water with a low ion concentration (20 °C ± 5 °C). Therefore, LAPONITE-RDS is gently added to the water and dispersed whilst continuously stirring at high speed. The dispersion can be used as soon as it is clear and no undispersed particles are visible. For optimum processibility, it is recommended to prepare a dispersion of LAPONITE-RDS with a solids content of up to 10 % in water.

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Construction chemicals

Properties and advantages
The use of LAPONITE-RDS leads to shear thinning rheological behavior and can be adjusted from thixotropic to pseudoplastic flow behavior of construction chemical products depending on the amount used. The additive is particularly suitable for spray applications, for example in dispersion-bound building material formulations such as putty compounds. It improves the storage stability and anti-settling properties of the system. LAPONITE-RDS can also be used as a stabilizer in anionic bitumen emulsions. It increases the viscosity of the dispersing medium and thus has an emulsion-stabilizing effect.

Recommended use

Mineral based systems	☐
Organically bound, water-based binder systems	■

■ especially recommended ☐ recommended

Recommended levels
0.5–5.0 % additive dispersion (10 % in water) based upon 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
To ensure optimum distribution and the best possible effectiveness and reproducibility in applications, LAPONITE-RDS must be fully hydrated in water with a low ion concentration (20 °C ± 5 °C). In order to achieve the best processibility, it is recommended to prepare a dispersion of LAPONITE-RDS with a solids content of up to 10 % in water. This also allows subsequent addition as a post-additive. Direct addition as a powder, especially in mineral binder systems (premixed dry mortars), is not recommended.

Adhesives and sealants

Special features and benefits
LAPONITE-RDS increases viscosity in the low shear range with a low impact in the high shear range. It improves processability and storage stability. It is also highly effective in preventing the settling of fillers, pigments, matting agents, or other solids used in aqueous adhesives and sealants.

Recommended levels
0.1–2.0 % additive (as supplied) based upon 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
To ensure optimum distribution and the best possible effectiveness and reproducibility in applications, LAPONITE-RDS must be fully hydrated in water with a low ion concentration (20 °C ± 5 °C). Therefore, LAPONITE-RDS is gently added to the water and dispersed whilst continuously stirring at high speed. The dispersion can be used as soon as it is clear and no undispersed particles are visible. For optimum processibility, it is recommended to prepare a dispersion of LAPONITE-RDS with a solids content of up to 10 % in water.

Special note
LAPONITE-RDS is a synthetic layered silicate. It hydrates and swells in water to provide translucent and colorless colloidal liquid dispersions known as sols. At a solids concentration of 10 % in water, these will remain free flowing for up to 24 hours.

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