LAPONITE-S 482

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-S 482 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-S 482 increases viscosity in the low shear range with a low impact in the high shear range. It improves the processability and storage stability of clear, pigmented, and matted Do-it-yourself (DIY) aqueous coatings as well as industrially applied aqueous coatings. Furthermore, LAPONITE-S 482 is highly effective in preventing the settling of pigments, extenders, matting agents, or other solids used in aqueous coating systems. LAPONITE-S 482 is a synthetic layered silicate modified with a patented dispersing agent. It hydrates and swells in water to provide translucent and colorless colloidal liquid dispersions known as sols.

Recommended use

Architectural coatings	■
Wood and furniture coatings	■

■ especially recommended □ recommended

Recommended levels
0.3–2.0 % 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-S 482 must be fully hydrated in water with a low ion concentration (20 °C ± 5 °C). Therefore, LAPONITE-S 482 is gently added to water whilst continuously stirring at high speed. After a few minutes, the viscosity of the pre-mix will begin to rise. At this time, it is recommended to turn off the stirrer and leave the dispersion to age for up to half an hour. During this period, the viscosity of the mixture will begin to fall and continuous mixing until the pre-mix forms a smooth homogeneous liquid can be applied. In order to achieve the best processibility, it is recommended to prepare a dispersion of LAPONITE-S 482 at a solids content of 20 to 25 % in water. Lower-filled dispersions are also suitable. The prepared LAPONITE-S 482 dispersion may be added to formulations at any point during manufacture.

Multi-Color-Paints (MCP)

Special features and benefits
LAPONITE-S 482 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-S 482 is highly recommended for formulating both the white and transparent base paints, as well as the protective colloid dispersion.

Recommended levels
4.0–6.0 % additive dispersion (7 % in demineralized water) based upon base paint.
5.0–10.0 % additive (as supplied) based upon protective colloid solution.

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-S 482 must be fully hydrated in water with a low ion concentration (20 °C ± 5 °C). Therefore, LAPONITE-S 482 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 as a colloid solution, it is recommended to mature the dispersion of LAPONITE-S 482 for 12–24 hours.

Household, industrial and institutional applications

Special features and benefits

LAPONITE-S 482 is a rheology additive that produces slight thixotropic flow behavior. It is used in aqueous systems and can be used universally as an anti-settling agent to prevent the settling of abrasives and other particles without thickening. Cleaners with LAPONITE-S 482 are easy to use and can be applied by spraying. Use of the additive improves adhesion to vertical surfaces, whereby the cleaning effect is improved due to the longer exposure time. LAPONITE-S 482 is particularly suitable for aqueous cleaners and care products in the pH range between 6 and 12.

Recommended use

Floor care products	□
Vehicle cleaners and care products	■
Cleaners for living spaces	■
Cleaners for the kitchen	■
Cleaners for wet rooms	■

■ especially recommended □ recommended

Recommended levels

0.1–5.0 % 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-S 482 must be fully hydrated in water with a low ion concentration (20 °C ± 5 °C). Therefore, LAPONITE-S 482 is gently added to the water and dispersed whilst continuously stirring at high speed. It is recommended to prepare a dispersion of LAPONITE-S 482 at a solids content of up to 25 % in water. The dispersion can be used as soon as it is clear and no undispersed particles are visible. The viscosity of the pre-mix will begin to rise at high solids content. At this time, it is recommended to turn off the stirrer and leave the dispersion to age for up to one hour. During this period, the viscosity of the mixture will begin to fall. Afterwards, continuous mixing can be applied for a further 30 minutes. For optimum processibility as a colloid solution, it is recommended to mature the dispersion of LAPONITE-S 482 for 12–24 hours.

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