CLOISITE-Ca++

Phyllosilicate for use as a flame retardant synergist in thermoplastics and SPVC applications, as well as for improving the barrier properties of thermoplastic compounds and paper coatings.

Product data

Composition
Phyllosilicate

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

Bulk density:	500-1100 kg/m^3
Delivery form:	powder

Storage and transportation
Product shelf life in unopened original packaging: 60 months
To be stored and transported between -30 °C and 50 °C.

Applications

Paper coatings

Special features and benefits

- Improves oil and grease resistance of several aqueous binders
- In certain formulations can lower the oxygen transmission rate of coatings

Recommended use
CLOISITE-Ca++ is suitable for aqueous paper coating formulations, particularly for improving oil and grease resistance. It is compatible with a range of binders, with best results demonstrated with PVOH. Significant improvement in grease resistance of acrylic styrene binders has also been observed.

Recommended levels
0.5-50 % additive (as supplied) based on the 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 optimal distribution, effectiveness, and reproducibility, CLOISITE-Ca++ must be added to water (20 ± 5 °C) slowly whilst stirring, and pre-dispersed at high shear forces for at least 20 minutes. For optimal incorporation, the concentration of the additive in this pre-mix should not exceed 10 %. CLOISITE-Ca++ should be fully hydrated before adding the remaining water and formulation components to the dispersion. No wetting and dispersing additives are required to produce this dispersion.

PVC compounds

Special features and benefits

- Can be used as a flame retardant synergist in SPVC applications
- Improves the anti-dripping properties
- Enables a reduction in filler loading, such as aluminum hydroxide or magnesium hydroxide
- Improves processing performance by lowering the amount of mineral fillers required
- Contributes to enhanced physical properties

Recommended levels

1-5 % additive (as supplied) based on the 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 achieve an optimum dispersion and exfoliation of the additive, co-rotating twin-screw extruders are recommended for compounding SPVC materials.

Special note

The impact on the final color of the formulation should be checked.

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