

CLAYTONE-APA

Rheology additive in powder form based on an organophilic phyllosilicate for polar to medium-polarity systems to generate thixotropic flow behavior.

Product Data

Composition

Organophilic phyllosilicate

Typical Properties

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

Loose bulk density: 150-250 kg/m³

Water content: 2 %

Specific weight: 1.7 g/cm³

Food Contact Legal Status

For the current food contact legal status, please contact our product safety department or visit www.byk.com for further information.

Storage and Transportation

CLAYTONE-APA should be transported and stored dry in the unopened original container at temperatures between 0 °C (32 °F) and 30 °C (86 °F).

Applications

Coatings Industry

Special Features and Benefits

Due to its special organic modification, CLAYTONE-APA is ideally suited to influencing the flow behavior of polar to medium-polarity coating systems. Using the additive produces thixotropic flow behavior, and therefore results in significant improvements to the anti-sagging properties while at the same time maintaining good leveling. This also optimizes storage stability, and prevents pigments and fillers from settling.

Recommended Use

| | |
|-----------------------------|-------------------------------------|
| Architectural coatings | <input checked="" type="checkbox"/> |
| Industrial coatings | <input checked="" type="checkbox"/> |
| Protective coatings | <input checked="" type="checkbox"/> |
| Wood and furniture coatings | <input checked="" type="checkbox"/> |
| Printing inks | <input checked="" type="checkbox"/> |
| Powder coatings | <input checked="" type="checkbox"/> |

especially recommended recommended

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Recommended Levels

0.3-2 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

Incorporation and Processing Instructions

The additive is incorporated while stirring, and preferably dispersed in the mill base at high shear forces for at least 10 minutes. Alternatively, it can also be incorporated using a 10 % pregel. The effect of CLAYTONE-APA can be increased by adding a booster or small quantities of a polar solvent or water.

Detergents, Cleaning and Care Products

Special Features and Benefits

CLAYTONE-APA is a rheology additive used to thicken solvent and oil systems. It is also used to stabilize water-in-oil emulsions. CLAYTONE-APA is self-activating and easily dispersible for medium- to high-polarity systems containing compounds including aromatics, alcohols, glycols, and esters. It can also be used in liquid non-ionic surfactants (alcohol ethoxylates). CLAYTONE-APA requires no activator for gelling.

Recommended Use

| | |
|------------------------------------|---|
| Industrial cleaning agents (polar) | ■ |
| Non-aqueous liquid detergents | ■ |

■ especially recommended □ recommended

Recommended Levels

0.5-3 % additive (as supplied) based upon the total formulation, depending on the properties of the formulation to be achieved.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

Incorporation and Processing Instructions

To achieve optimum effectiveness, CLAYTONE-APA should be incorporated at high shear forces. The additive is effective in a multitude of organic liquid systems and requires no specific processing temperature. CLAYTONE-APA can be dispersed using a high-speed stirring unit. CLAYTONE-APA can be incorporated either as a pregel or in situ.

Pregel can be produced as follows:

1. Place the organic solvent in the dispersion vessel
2. Slowly add the CLAYTONE-APA (10 % based on the pregel) while stirring
3. Stir for 15 minutes at high speed

It can be incorporated directly during production as follows:

1. Place the organic solvent or oil in the dispersion vessel
2. Slowly add the CLAYTONE-APA while stirring
3. Stir for 15 minutes at high speed
4. Continue to add the other formulation components

When post-adding to the finished system, ensure that CLAYTONE-APA is well dispersed. Adding to a hot base can cause a very rapid external wetting of the powder. These wetted particles with a "dry" core are very difficult to disperse completely. CLAYTONE-APA should therefore be used in a system at a temperature below 50 °C. The use of a high-speed mixer or a low shear dissolver is required for a later dispersion. Surfactants and emulsifying agents may be added only after CLAYTONE-APA has been activated, otherwise the effect of the additive could be reduced or completely eliminated. When using emulsions, CLAYTONE-APA should be incorporated into the oil phase.

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Additive Guide



BYK USA Inc.
524 South Cherry Street
P.O. Box 5670
Wallingford, CT 06492
USA
Tel 203 265-2086
Fax 203 284-9158

cs.usa@byk.com
www.byk.com

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