

CLAYTONE-VZ

Rheology additive in powder form based on an organophilic phyllosilicate especially for polar as well as for 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: 250-400 kg/m³

Water content: max. 3 %

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-VZ 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-VZ 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 improvement 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"/>
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 is 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-VZ can be increased by adding a booster or small quantities of a polar solvent or water.

Thermosets

Special Features and Benefits

CLAYTONE -VZ is a modified phyllosilicate rheology additive in powder form. In unsaturated polyester based putty compounds CLAYTONE-VZ develops a strong thixotropy that provides a smooth application behavior. The additive improves in particular the resin separation on top of the putty surface during storage. Compared with commonly used thixotropes, a lower dosage can be applied.

Recommended Use

Putties	<input checked="" type="checkbox"/>
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especially recommended recommended

Recommended Levels

0.2-2 % 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

CLAYTONE-VZ can be incorporated directly into the resin, and should be dispersed together with the fillers at a high shear force.

Detergents, Cleaning and Care Products

Special Features and Benefits

CLAYTONE-VZ is a rheology additive used to thicken solvent and oil systems. It is also used to stabilize water-in-oil emulsions. The additive should be used as a gelling agent for medium-polarity to high-polarity systems containing compounds such as aromatics, alcohols, glycols, and esters. It requires no activator for gelling, except for in very polar systems.

Recommended Use

Cleaning agents for print rollers	■
Industrial cleaning agents (polar)	■

■ 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 the optimum effectiveness, CLAYTONE-VZ requires both a high shear force as well as the addition of a polar activator during incorporation. CLAYTONE-VZ is effective in a multitude of organic liquid systems and requires no specific processing temperature. CLAYTONE-VZ can be dispersed using a high-speed stirrer.

The following polar activators are recommended:

Propylene carbonate/H ₂ O (95:5)	25-40 % based on CLAYTONE-VZ
Ethanol/H ₂ O (95:5)	40-60 % based on CLAYTONE-VZ
Methanol/H ₂ O (95:5)	25-40 % based on CLAYTONE-VZ

CLAYTONE-VZ can be incorporated either as a pregel or in situ. To prepare a pregel follow steps 1-5 using 10 % CLAYTONE-VZ (based on pregel).

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

Surfactants and emulsifying agents may be added only after CLAYTONE-VZ has been activated, otherwise the effect of the additive could be reduced or completely eliminated. When using emulsions, CLAYTONE-VZ should be incorporated into the oil phase.

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Additive Guide



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