OPTIGEL-CK XR

Gellant

Product Data

Special Features and Benefits
OPTIGEL-CK XR is a specially selected and activated bentonite product, is highly swelling in water and shows a marked thixotropic thickening effect. OPTIGEL-CK XR prevents settling of heavy pigments/extenders and incorporates a yield value into the system.

OPTIGEL-CK XR is purely inorganic and stable against diluted acids and bases. Gels produced with OPTIGEL-CK XR also withstand oxidation or microbial degradation. OPTIGEL-CK XR is compatible with most emulsions, pigments or extenders. Higher concentration of electrolytes should be avoided since otherwise the gel structure can be damaged. By using OPTIGEL-CK XR storage stable systems can be produced. Due to the incorporated yield value and thixotropy the application is significantly improved. OPTIGEL-CK XR prevents settling of heavy pigments or fillers. As thixotropic agent OPTIGEL-CK XR reduces sagging and allows the application of thick coatings.

Recommended Use

- emulsion paints and plasters
- dip coatings (electro deposition coatings)
- primers
- sealants and putties
- ceramic frits and compounds
- welding rods
- foundry washes
- cleaners and polishes
- adhesives
- bitumen emulsions
- water reducible systems
- oil-in-water emulsions

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

Form:	free flowing powder
Colour:	white
Brightness (Elrepho R 457):	approx. 60-65 %
Viscosity (5 % suspension 1 h ageing) Brookfield 100 rpm:	>400 mPa.s
Specific weight:	approx. 2.6 g/cm^3
Loose bulk density:	550-700 g/l
Residue on 45 µm screen:	max. 5 %
Particle size at complete dispersion:	1-5 µm
Water content:	approx. 8-13 %
pH-value (2 % suspension):	9-11
Temperature stability:	up to around 400 °C

Special Note
To reduce the microbial count the additive has been sterilized by gamma irradiation.

Incorporation and Processing Instructions

OPTIGEL-CK XR is hydrophilic and easily wetted by water. OPTIGEL-CK XR starts swelling even in cold water; the use of warm water improves and accelerates the delamination or dispersion. To obtain maximum effectiveness, the incorporation using high shear equipment (dissolver, mill) is recommended.

OPTIGEL-CK XR should be introduced to the water in the initial dispersion phase. Complete hydration prior to addition of the other ingredients is necessary to guarantee optimum effectiveness. Stirring for 10-15 minutes under high shear is therefore recommended. OPTIGEL-CK XR can also be used in form of a separate masterbatch. If this approximately 5 % gel is produced under low shear conditions, this pregel should be allowed to age over night to avoid post thickening. Addition of dispersing agents, wetting agents etc is not necessary.

Recommended Levels

Depending on requirements between 0.1 and 3 % of OPTIGEL-CK XR is used.

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

Storage and Transportation

To be stored and transported at temperatures between 0 °C and 30 °C.

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