

# 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 <sup>3</sup>
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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