

OPTIGEL-WX

Rheology additive based on an activated phyllosilicate for aqueous systems and mineral pre-mix mortars to generate thixotropic flow behavior.

Product Data

Composition

Activated phyllosilicate

Typical Properties

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

Specific density: 2.2 g/cm³
Bulk density: 500-650 kg/m³
Moisture content: max. 13 %
Supplied as: free-flowing, white powder
pH value (2 % in H₂O): 10.5

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

OPTIGEL-WX is hygroscopic and should be transported and stored dry in the unopened original container at temperatures between 0 °C and 30 °C.

Special Note

A preservative should also be used when preparing and storing master pastes (approx. 4 %).

Applications

Coatings Industry

Special Features and Benefits

OPTIGEL-WX generates thixotropic flow behavior. It improves processability and storage stability as it is highly effective at preventing solids settling. In addition, it reduces the sagging tendency after application which makes it possible to achieve greater layer thicknesses. OPTIGEL-WX is inorganic and stable to diluted acids and bases.

Recommended Use

OPTIGEL-WX is suitable for a variety of aqueous systems. It is suitable for pH neutral, acidic and basic coatings.

Architectural coatings	■
Wood and furniture coatings	■

■ especially recommended □ recommended

Recommended Levels

0.3-2.0 % 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



OPTIGEL-WX is hydrophilic and easy to incorporate in water. To ensure optimum distribution and the best possible effectiveness and reproducibility in applications, the additive must be added to water (20 °C ± 5 °C) slowly whilst stirring, and pre-dispersed at high shear forces for at least 20 minutes. OPTIGEL-WX should be fully hydrated before the remaining components of the formulation can be added to the dispersion. No wetting or dispersing additives are required to produce this dispersion.

Construction industry**Special Features and Benefits**

In free-flowing systems, OPTIGEL-WX prevents the aggregate settling and the tendency towards syneresis. In high-solid construction systems it achieves smooth processability and improved anti-sagging properties.

Recommended Use

OPTIGEL-WX is suitable for mineral-based pre-mix mortars.

Self-leveling screeds	
Self-leveling underlayments	

 especially recommended  recommended

Recommended Levels

0.05-0.5 % 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

OPTIGEL-WX is hydrophilic and can be added as supplied to the dry mix mortar formulation.

Detergents, Cleaning and Care Products**Special Features and Benefits**

OPTIGEL-WX is a rheology additive that generates thixotropic flow behavior. It can be used universally in aqueous systems as an anti-settling agent to prevent abrasive materials and other particles settling, without excessive thickening. Cleaning products with OPTIGEL-WX are easy to use and can be applied by spraying. The use of the additive improves adhesion to vertical surfaces, which improves the cleaning action as a result of the longer exposure time. OPTIGEL-WX is stable to acids and bases in a pH range of 2–13. It has excellent electrolyte resistance to sodium salts and surfactants.

Recommended Use

OPTIGEL-WX is particularly suitable for use in aqueous cleaning and care products in the pH range between 2 and 13.

Floor polishes	<input type="checkbox"/>
Vehicle cleaning and care products	<input checked="" type="checkbox"/>
Cleaning products for living rooms	<input type="checkbox"/>
Cleaning products for the kitchen	<input checked="" type="checkbox"/>
Cleaning products for wet rooms	<input checked="" type="checkbox"/>
Detergents	<input checked="" type="checkbox"/>

☒ especially recommended ☐ recommended

Recommended Levels

0.5-2.0 % 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

OPTIGEL-WX is hydrophilic and easy to incorporate in water. To ensure optimum distribution and the best possible effectiveness and reproducibility in applications, the additive must be added to water (20 °C ± 5 °C) slowly whilst stirring, and pre-dispersed at high shear forces for at least 20 minutes. For optimum incorporation, the concentration of OPTIGEL-WX in this pre-mix should be 3-5 weight percent. It should be fully hydrated before the rest of the water and the remaining formulation components can be added to the dispersion. No wetting or dispersing additives are required to produce this dispersion.

Special Note

Alongside the rheological requirement profile, the physical properties (color, transparency etc.) and the compatibility with the chemical environment of the respective detergent and cleaning agent also determine the choice of the best-suited rheology additive.

Agricultural industry**Special Features and Benefits**

OPTIGEL-WX is an all-purpose and ultra-pure rheology additive to achieve thixotropic flow behavior in aqueous formulations.

Recommended Use

OPTIGEL-WX is particularly suitable for aqueous crop protection formulations based on emulsions and emulsion concentrates as well as for suspensions/suspension concentrates and water-dispersible granulates.

Recommended Levels

0.05-1.50 % 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

OPTIGEL-WX is hydrophilic and easy to incorporate in water. To ensure optimum distribution and the best possible effectiveness and reproducibility in applications, the additive must be added to water ($20\text{ °C} \pm 5\text{ °C}$) slowly whilst stirring, and pre-dispersed at high shear forces for at least 20 minutes. For optimum incorporation, the concentration of OPTIGEL-WX in this pre-mix should be 5-7 weight percent. It should be fully hydrated before the rest of the water and the remaining formulation components can be added to the dispersion. No wetting or dispersing additives are required to produce this dispersion.

Adhesives and sealants**Special Features and Benefits**

OPTIGEL-WX generates thixotropic flow behavior in adhesives and sealants. It improves processability and storage stability as it is highly effective at preventing solids settling. It improves the slip behavior, anti-sagging properties and ridge formation. OPTIGEL-WX is inorganic and stable to diluted acids and bases.

Recommended Use

OPTIGEL-WX is suitable for a variety of aqueous systems. It is suitable for pH neutral, acidic and basic adhesives and sealants.

Floor adhesives	<input checked="" type="checkbox"/>
Acrylate sealants	<input checked="" type="checkbox"/>
Wood glues	<input checked="" type="checkbox"/>

☒ especially recommended ☐ recommended

Recommended Levels

0.5-2.0 % 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

OPTIGEL-WX is hydrophilic and easy to incorporate in water. To ensure optimum distribution and the best possible effectiveness and reproducibility in applications, the additive must be added to water ($20\text{ °C} \pm 5\text{ °C}$) slowly whilst stirring, and pre-dispersed at high shear forces for at least 20 minutes. OPTIGEL-WX should be fully hydrated before the remaining components of the formulation can be added to the dispersion. No wetting or dispersing additives are required to produce this dispersion.



Additive Guide



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