OPTIGEL-WM

Rheology additive based on an activated phyllosilicate for aqueous systems 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:	2.3 g/cm³
Bulk density:	ca. 690 kg/m³
Moisture content:	ca. 9 %
Supplied as:	free-flowing, cream-colored powder
pH value (2 % in H_2O):	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-WM is hygroscopic and should be transported and stored dry in the unopened original container at temperatures between 0 °C (32 °F) and 30 °C (86 °F).

Special Note
A preservative should also be used when preparing and storing master pastes (approx. 3 %).

Applications

Coatings Industry

Special Features and Benefits
OPTIGEL-WM 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.

Recommended Use
OPTIGEL-WM is suitable for a variety of aqueous coating systems and particularly suitable for use in architectural coatings.

Architectural coatings	■

■ especially recommended □ recommended

Recommended Levels
0.5-1.0 % 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-WM 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) (68 °F ± 41 °F) slowly whilst stirring, and pre-dispersed at high shear forces for at least 20 minutes. OPTIGEL-WM should be fully hydrated before the remaining formulation components can be added to the dispersion. No wetting or dispersing additives or polar activators are required to produce this dispersion. OPTIGEL-WM can be also be added to the formulation directly, as a powder at the start of manufacture.

Special Note
OPTIGEL-WM reacts sensitively to ions. If the mains water being used has a high total hardness, use deionized water for processing.

Detergents, Cleaning and Care Products

Special Features and Benefits
OPTIGEL-WM is a rheology additive that generates thixotropic flow behavior and has a high thickening effect. It is used to stabilize oil-in-water emulsions. It can be used universally in aqueous systems as an anti-settling agent to prevent abrasive materials and other particles settling in vehicle cleaning and care products. The use of the additive improves adhesion to vertical surfaces, which improves the cleaning action as a result of the longer exposure time. OPTIGEL-WM is stable to weak acids and bases in a pH range of 5-11. It has good electrolyte resistance to sodium salts and surfactants.

Recommended Use
OPTIGEL-WM is particularly suitable for use in aqueous cleaning and care products in the pH range between 5 and 11.

Leather care	■
Vehicle cleaning and care products	■

■ especially recommended □ recommended

Recommended Levels
0.3-1.5 % 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-WM 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) (68 °F ± 41 °F) slowly whilst stirring, and pre-dispersed at high shear forces for at least 20 minutes. For optimum incorporation, the concentration of OPTIGEL-WM in this pre-mix should be approx. 3 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-WM is an all-purpose rheology additive to achieve thixotropic flow behavior in aqueous formulations.

Recommended Use
OPTIGEL-WM 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-WM is hydrophilic and easy to incorporate in water. To ensure optimum distribution and the best possible effectiveness and reproducibility in applications, OPTIGEL-WM must be added to water (20 °C ± 5 °C) (68 °F ± 41 °F) slowly whilst stirring, and pre-dispersed at high shear forces for at least 20 minutes. For optimum incorporation, the concentration of OPTIGEL-WM in this pre-mix should be 5-7 weight percent. OPTIGEL-WM 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.

OPTIGEL-WM

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