BYK-3420

Hydrolytically stable silicone surfactant for aqueous inkjet inks, care products and other aqueous systems. The additive provides a significant reduction in the surface tension, particularly in the presence of organic cosolvents. The surface tension remains at the same level even after long-term storage of the inkjet inks.

Product Data

Composition
Polyether-modified polydimethylsiloxane

SVHC label-free (EU SDS)

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

Active substance: 100 %
Density (20 °C): 1.05 g/ml

Storage and Transportation
Close container tightly after use.

Special Note
The additive is particularly suitable for systems with organic cosolvents.

The cyclic siloxane content D4/D5/D6 is less than 0.1 % in each case, therefore the SVHC label is not required in the safety data sheet.

Applications

Inkjet Inks

Special Features and Benefits
The additive provides a significant reduction in the surface tension of aqueous systems, especially in cosolvent-rich formulations. The special molecular structure of BYK-3420 is characterized by particularly good hydrolytic stability, which makes it suitable primarily for aqueous inkjet inks. During storage of the inks, the additive keeps the surface tension at the same level, even at elevated temperatures. BYK-3420 produces good spreading behavior in aqueous inkjet inks on critical (i.e. non-polar) substrates and consequently improves the print quality. It has no effect or only a very minor effect on foam stabilization. Recoatability is not impaired and surface slip is not increased. If higher surface slip is required, we recommend combining it with a polysiloxane such as BYK-333 or BYK-3760.

Recommended Use
The additive is particularly recommended for all aqueous inkjet inks.

Recommended Levels
0.1-1.5 % additive (as supplied) based on the total formulation in inkjet inks.

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

Incorporation and Processing Instructions
It is preferable to add the additive to the final formulation. However, it can be used at any stage during manufacture.

Detergents, Cleaning and Care Products

Special Features and Benefits
The additive provides a significant reduction in the surface tension of aqueous systems. BYK-3420 particularly improves substrate wetting on non-polar substrates and leveling. It does not stabilize or only marginally stabilizes the foam in the system, and it has no effect on the next layer. The additive does not increase the surface slip.

Recommended Use
The additive is recommended for care products in the neutral pH range.

Recommended Levels
0.05-0.5 % additive (as supplied) based on the total formulation in aqueous care products.

When used in care products certified according to the Austrian Ecolabel UZ 63, the added quantity must not exceed 0.25 %.

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

Incorporation and Processing Instructions
It is preferable to add the additive to the final formulation. However, it can be used at any stage during manufacture.

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