

BYK-379

Silicone-containing surface additive for solvent-free, solvent-borne and aqueous printing inks, inkjet inks, and coating systems. Very strong reduction of static and dynamic surface tension with minimal foam stabilization.

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.

Density (20 °C): 1.02 g/ml
Active substance: 100 %
Flash point: > 100 °C

Storage and transportation

Separation or turbidity may occur during storage and transportation below 10 °C. Before use, heat to 20 °C and stir well.

Special note

The cyclic siloxane content D4/D5/D6 of BYK-379 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 strong reduction of static and dynamic surface tension in UV systems, especially in UV inkjet inks, with only minimal foam stabilization. The high dynamic properties improve the wetting in fast printing processes as well as the jetting properties and the drop spread on the substrate in UV inkjet inks. The strong reduction of static surface tension simultaneously leads to optimized anti-crater properties, good substrate wetting, and reduced coefficient of friction. This increases the surface slip and thus the scratch resistance.

Recommended use

The additive is recommended for all systems, especially for UV inkjet inks.

Recommended levels

0.1–1.5 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

Incorporation and processing instructions

The additive should preferably be added to the finished formulation. However, it can be incorporated during any stage of the production process.

Printing inks**Special features and benefits**

The additive provides a strong reduction of static and dynamic surface tension in UV systems, especially in UV overprint varnishes, with only minimal foam stabilization. Due to the high dynamic properties, the wetting in fast printing processes is improved. The strong reduction of static surface tension simultaneously leads to optimized anti-crater properties, good substrate wetting, and reduced coefficient of friction. This increases the surface slip and thus the scratch resistance.

Recommended use

The additive is recommended for all systems, especially for UV overprint varnishes.

Recommended levels

0.1–1.5 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

Incorporation and processing instructions

The additive should preferably be added to the finished formulation. However, it can be incorporated during any stage of the production process.

Coatings industry**Special features and benefits**

The additive provides a strong reduction of surface tension and therefore particularly improves the substrate wetting and anti-crater properties. In addition, an increased surface slip and thus an enhanced scratch resistance is achieved. BYK-379 shows high effectiveness at low dosage and is only very slightly foam-stabilizing. The recoatability should be checked.

The additive offers broad compatibility in aqueous, solvent-borne, and solvent-free systems and is particularly recommended for solvent-free radiation-curing systems.

Recommended use

General industrial coatings	<input checked="" type="checkbox"/>
Wood and furniture coatings	<input type="checkbox"/>

☒ especially recommended ☐ recommended

Recommended levels

0.01–0.2 % additive (as supplied) based on the total formulation, in exceptional cases up to 0.5 %.

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

Incorporation and processing instructions

The additive can be incorporated during any stage of the production process, including post-addition.

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This issue replaces all previous versions.