

BYK-333

Silicone-containing surface additive for solvent-free, solvent-borne, and aqueous systems with a wide range of applications that provides a strong reduction of surface tension.

Product data

Composition

Polyether-modified polydimethylsiloxane

Typical properties

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

Density (20 °C): 1.04 g/cm³
 Active substance: 100 %
 Flash point: > 101 °C
 Delivery form: liquid

Storage and transportation

Product shelf life in unopened original packaging: 60 months
 Separation or turbidity may occur at temperatures below 5 °C. Warm to 20 °C and stir.

Applications

Coatings industry

Special features and benefits

The additive causes a strong reduction of the surface tension. It therefore particularly improves substrate wetting and avoids cratering. Furthermore, surface slip is increased. In aqueous systems, BYK-333 improves the anti-blocking properties. Here, small amounts of organic co-solvents are needed for optimal effectiveness.

Recommended use

General industrial coatings	<input checked="" type="checkbox"/>
Can coatings	<input checked="" type="checkbox"/>
Wood and furniture coatings	<input checked="" type="checkbox"/>
Automotive OEM coatings	<input checked="" type="checkbox"/>
Automotive refinish coatings	<input checked="" type="checkbox"/>
Marine and protective coatings	<input checked="" type="checkbox"/>
Architectural coatings	<input type="checkbox"/>
Floor coatings	<input type="checkbox"/>

☒ especially recommended ☐ recommended

Recommended levels

0.05–0.3 % additive (as supplied) based upon 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 can be added during any stage of the production process and can also be post-added. The incorporation should be performed while stirring with moderate shear forces.

Special note

BYK-333 is highly effective and very user-friendly. Nevertheless, before using it, test series should be carried out to determine the extent to which it stabilizes foam and affects recoatability and cratering.

Printing inks**Special features and benefits**

The additive causes a strong reduction of the surface tension. It therefore particularly improves substrate wetting and avoids cratering. Furthermore, surface slip is increased.

Recommended use

The additive is particularly recommended for all solvent-borne, solvent-free, and aqueous printing inks and overprint varnishes.

Recommended levels

0.05–0.3 % additive (as supplied) based upon total formulation. In aqueous and UV systems up to 1 %.

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 and can also be post-added.

Special note

BYK-333 is highly effective and very user-friendly. Nevertheless, before using it, test series should be carried out to determine the extent to which it stabilizes foam and affects recoatability and cratering.

Inkjet inks**Special features and benefits**

The additive causes a strong reduction of the surface tension. It therefore particularly improves substrate wetting and avoids cratering. Furthermore, surface slip is increased.

Recommended use

The additive is particularly recommended for all solvent-borne, solvent-free, and aqueous inkjet inks.

Recommended levels

0.05–0.3 % additive (as supplied) based upon total formulation. In aqueous and UV systems up to 1 %.

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 and can also be post-added.

Special note

BYK-333 is highly effective and very user-friendly. Nevertheless, before using it, test series should be carried out to determine the extent to which it stabilizes foam and affects recoatability and cratering.

Adhesives and sealants

Special features and benefits

BYK-333 is a highly effective silicone additive and provides a strong reduction of surface tension. It therefore improves the wetting of critical surfaces and avoids cratering.

Recommended use

It is particularly recommended for improving the substrate wetting of adhesive systems based on polyurethanes, epoxies, and acrylates.

Recommended levels

0.05–0.3 % additive (as supplied) based upon 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 can be incorporated during any stage of the production process and can also be post-added.

Thermosets

Special features and benefits

BYK-333 is a highly effective silicone additive. It provides a strong reduction of surface tension, thereby improving the wetting of critical substrates.

Recommended use

It is particularly recommended for improving the substrate wetting of ambient-curing polyurethane- and epoxy-based systems.

Recommended levels

0.05–0.3 % additive (as supplied) based upon 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 can be incorporated during any stage of the production process and can also be post-added. It has proven successful to add the additive at the end of the process to avoid any foam stabilization.

Special note

BYK-333 is highly effective and very user-friendly. Nevertheless, before using it, test series should be carried out to determine whether surface defects occur in certain systems.

Construction chemicals

Special features and benefits

BYK-333 is a highly effective silicone additive. The strong reduction of surface tension improves the wetting of critical substrates.

Recommended use

Particularly recommended for improving the substrate wetting of organically modified (2-pack/3-pack) construction material formulations.

Joint fillers	<input checked="" type="checkbox"/>
Polymer waterproofing	<input checked="" type="checkbox"/>
Self-leveling compounds	<input checked="" type="checkbox"/>
Repair mortars	<input type="checkbox"/>

☒ especially recommended ☐ recommended

Recommended levels

0.05–0.3 % additive (as supplied) based upon 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 can be added to the liquid binder component at any time.

Special note

BYK-333 is highly effective and very user-friendly. Nevertheless, the influence on the adhesion properties should be checked.

Leather finishes and coated fabrics**Special features and benefits**

The additive causes a strong reduction of the surface tension. It therefore particularly improves substrate wetting and avoids cratering. Furthermore, surface slip is increased. In aqueous systems, BYK-333 improves the anti-blocking properties. Here, small amounts of organic co-solvents are needed for optimal effectiveness.

Recommended use

The additive is recommended for all solvent-borne, solvent-free, and aqueous coatings, polyurethanes and acrylates. It is particularly suitable for high-solid and 2-pack polyurethane systems.

Recommended levels

0.05–0.5 % additive (as supplied) based upon 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 can be added during any stage of the production process and can also be post-added. The incorporation should be performed while stirring with moderate shear forces.

Special note

BYK-333 is highly effective and very user-friendly. Nevertheless, before using it, test series should be carried out to determine the extent to which it stabilizes foam.



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