BYK-3560

Silicone- and fluorine-free surface additive for increasing the surface energy in aqueous, solvent-borne, UV-curable, and high-solid systems.

Product data

Composition
Polyether-macromer-modified polyacrylate

Silicone-free

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

Density (20 °C):	1.06 g/cm³
Active substance:	100 %
Color:	colorless-light yellow
Delivery form:	liquid

Storage and transportation
Product shelf life in unopened original packaging: 36 months
To be stored and transported at a temperature below 50 °C. At temperatures below 10 °C the product may become solid. Warm to 20-30 °C and stir.

Applications

Coatings industry

Special features and benefits
BYK-3560 increases the surface energy of cured coatings overall, especially the polarity. This enables the improved adhesion of subsequent layers such as paint, laminating foils, adhesives, and printing inks. The cured coating is also wetted more effectively, producing an excellent leveling of the subsequent coating. In addition, BYK-3560 also improves the leveling of the system in which it is being used. BYK-3560 has no impact on the surface tension of the liquid coating and maintains the high transparency of clear coats when added to them. The additive exhibits good processing properties and can be used in aqueous, solvent-borne, UV-curable, and high-solid systems.

Recommended use

Automotive OEM coatings	■
Automotive refinish coatings	■
General industrial coatings	■
Can coatings	■
Coil coatings	■
Wood and furniture coatings	□
Marine and protective coatings	□
Floor coatings	□
Architectural coatings	□

■ especially recommended □ recommended

Recommended levels

0.1-0.5 % additive (as supplied) based on aqueous systems without co-solvents.
0.6-1.0 % additive (as supplied) based on aqueous systems with high proportion of co-solvents.
1.0-2.0 % additive (as supplied) based on solvent-borne, polar systems.
0.5-1.5 % additive (as supplied) based on solvent-borne, non-polar systems.

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.

Special note

BYK-3560 must be sufficiently incompatible in the system so as to be able to orientate toward the coating-air interface. The drying temperature can influence the effectiveness. The polyether structures can degrade at temperatures above 170 °C (baking time over 10-15 min). BYK-3560 does not cross-link with the binder system. Its long-term effect is therefore very system-dependent.

Printing inks

Special features and benefits

BYK-3560 can be used in aqueous, solvent-borne, and UV-curable systems. The additive increases the surface energy of dried or cured inks and printing primers overall, especially the polarity. This leads to improved overprinting behavior and leveling of subsequent layers, such as additional printing inks and overprint varnishes. It can also have a positive effect on the adhesion of the overprinted layers. BYK-3560 has no impact on the surface tension of the liquid ink and maintains the transparency of overprint varnishes when added to them.

Recommended use

Printing inks	■
Printing primer, pre-print varnishes	■
Overprint varnishes	□

■ especially recommended □ recommended

Recommended levels
0.1-2.0 % 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 can be incorporated during any stage of the production process, including post-addition.

Special note
BYK-3560 must be sufficiently incompatible in the system so as to be able to orientate toward the coating-air interface. The additive does not cross-link with the binder system. Its long-term effect is therefore very system-dependent.

PVC plastisols

Special features and benefits
BYK-3560 increases the surface energy of cured plastisols overall, especially the polarity. This enables the improved adhesion of subsequent layers such as paint, laminating foils, adhesives, and printing inks. The cured plastisol layer is also wetted more effectively, producing an excellent leveling of the subsequent layers. In addition, BYK-3560 also improves the leveling of the system in which it is being used. BYK-3560 has no impact on the surface tension of the liquid plastisol and maintains the high transparency of topcoats when added to them. The additive exhibits good processing properties and can be used all systems.

Recommended levels
0.5-1.5 % 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 can be incorporated during any stage of the production process, including post-addition.

Leather finishes and coated fabrics

Special features and benefits
BYK-3560 increases the surface energy of cured coatings overall, especially the polarity. This enables the improved adhesion of subsequent layers such as paint, laminating foils, adhesives, and printing inks. The cured coating is also wetted more effectively, producing an excellent leveling of the subsequent coating. In addition, BYK-3560 also improves the leveling of the system in which it is being used. BYK-3560 has no impact on the surface tension of the liquid coating and maintains the high transparency of clear coats when added to them. The additive exhibits good processing properties and can be used in aqueous, solvent-borne, UV-curable, and high-solid systems.

Recommended levels
0.5-1.5 % 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 can be incorporated during any stage of the production process, including post-addition.

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