NANOBYK-3611

Aluminum oxide nanoparticle dispersion for improving the scratch resistance of solvent-borne and solvent-free coatings and UV systems.

Product Data

Composition
Aluminum oxide nanoparticle dispersion

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

Nanoparticle content:	30 %
Particle size D_{50}:	20 nm
Non-volatile matter (20 min., 150 °C):	38 %
Solvents:	Methoxypropylacetate
Density (20 °C):	1.26 g/ml
Viscosity (20 °C):	15 mPa·s
Flash point:	46 °C

Storage and Transportation
To be stored and transported between 5 °C and 40 °C.

Special Note
The product must be stirred thoroughly before processing. Dried additive residues must be removed from the container since they can lead to seeds if introduced into the final product. Containers that are not completely emptied must be closed immediately after use as this may otherwise lead to seeding.

Applications

Coatings Industry

Special Features and Benefits
The additive improves the scratch resistance of coating surfaces and is particularly recommended for use in clearcoats. Even low levels of 0.5-6 % NANOBYK-3611 considerably improve the scratch resistance without affecting the optical properties of the coating, such as gloss, color, transparency or physical properties.

NANOBYK-3611 has no effect on the surface slip. If increased surface slip is desired, combinations with a small amount of polysiloxane are recommended (0.05-0.1 %). NANOBYK-3611 can be used in solvent-borne and solvent-free coating systems, in solvent-borne and solvent-free UV systems, and in dual-cure systems.

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Recommended Use

General industrial coatings	■
Wood and furniture coatings	■
Automotive coatings	□
Architectural coatings	□
Floor coatings	□

■ especially recommended □ recommended

Recommended Levels

0.5-6 % additive (as supplied) based on the total formulation.

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

Incorporation and Processing Instructions

The product reaches its full effectiveness when added at low shear and with a sufficiently long incorporation time. This ensures that even distribution in the binder system is achieved.

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