

BYK-9077

Solvent-free wetting and dispersing additive for solvent-borne and solvent-free coatings, adhesives, PVC plastisols, ambient curing resin systems, SMC, pultrusion, and solvent-free UV printing inks. Production of color masterbatches for thermoplastics. Particularly recommended for basic carbon black pigments.

Product data

Composition

Polyglycol polyester modified polyalkylene imine

Typical properties

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

Density (20 °C): 1.05 g/ml

Amine value: 48 mg KOH/g

Storage and transportation

Separation or turbidity may occur. Warm to 60 °C and mix well. Product efficiency is not influenced.

Special note

BYK-9077 does not contain plasticizers.

Applications

Coatings, printing inks, adhesives and PVC plastisols

Special features and benefits

BYK-9077 deflocculates pigments by means of steric stabilization. It also generates a uniform electrical charge in the pigment particles. The resulting repulsion effect and the steric stabilization prevent any coflocculation which leads to non-floating coloring in pigment blends. As a result of the small particle size of the deflocculated pigments, high levels of gloss can be achieved and the color strength is improved. In addition, the transparency is increased in transparent pigments and the hiding power in opaque pigments. The viscosity is reduced. In this way, the flow characteristics are also improved and a higher pigment load is possible.

Recommended use

BYK-9077 is suitable for all pigments and is particularly recommended for stabilizing basic carbon black pigments. It is used in solvent-borne and solvent-free coatings, adhesives and PVC plastisols as well as in solvent-free UV printing inks. A key application area is solvent-free pigment concentrates for these applications.

Recommended levels

Amount of additive (as supplied) based upon pigment:

Inorganic pigments:	5–10 %
Titanium dioxide:	1–3 %
Organic pigments:	10–25 %
Carbon black:	15–50 %

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

Incorporation and processing instructions

For optimum performance, the additive must be incorporated into the millbase before addition of pigments.

Thermosets**Special features and benefits**

BYK-9077 deflocculates pigments by means of steric stabilization. It also generates a uniform electrical charge in the pigment particles. The resulting repulsion effect and the steric stabilization prevent any coflocculation which leads to non-floating coloring in pigment blends. As a result of the small particle size of the deflocculated pigments, high levels of gloss can be achieved and the color strength is improved. In addition, the transparency is increased in transparent pigments and the hiding power in opaque pigments. The viscosity is reduced. In this way, the flow characteristics are also improved and a higher pigment load is possible.

Recommended use

BYK-9077 is suitable for all pigments and is particularly recommended for stabilizing basic carbon black pigments. It can also be used to improve the wetting of carbon fibers in the prepreg, pultrusion and SMC area. This brings about a greater process reliability.

Recommended levels

5–30 % additive (as supplied) based on organic pigments and carbon blacks for pigment stabilization.
0.5–1 % additive (as supplied) based on the fiber content, for wetting carbon fibers.

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

Thermoplastics**Special features and benefits**

BYK-9077 significantly reduces the viscosity and brings about Newtonian flow characteristics in the millbase. It improves the torque build-up, the throughput, the viscosity (MVR), the filter pressure value (FPV), and the dispersion quality.

Recommended use

BYK-9077 is recommended for organic pigments and particularly for basic carbon black pigments. It is used in thermoplastic compounds and color masterbatches based on PE, PP, ABS, PVC, PET and PA.

Recommended levels

5–30 % additive (as supplied) based on organic pigments and carbon blacks for pigment stabilization.

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

Incorporation and processing instructions

For optimum performance, the additive should be added to the pigments or the plastic prior to, or during compounding.



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