DISPERBYK-2200

Wetting and dispersing additive for solvent-borne and solvent-free liquid coatings, powder coatings, printing inks, and inkjet inks to stabilize phthalocyanine pigments and carbon blacks

Product Data

Composition
High molecular weight copolymer with pigment affinic groups

Solvent-free

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

Bulk density (20 °C):	0.6 g/cm³
Non-volatile matter:	100 %
Flash point:	> 150 °C
Melting point:	54 °C
Supplied as:	Pellets

Food Contact Legal Status
For the current food contact legal status, please contact our product safety department or visit www.byk.com for further information.

Storage and Transportation
To be stored and transported at a temperature below 45 °C

Applications

Coatings Industry

Special Features and Benefits
DISPERBYK-2200 is characterized by its highly effective stabilization, particularly of phthalocyanine pigments and carbon blacks in solvent-borne and solvent-free coating systems. In combination with phthalocyanine pigments, the use of DISPERBYK-2200 minimizes thixotropy whilst generating Newtonian flow behavior. It also significantly improves both color strength and transparency, and increases gloss whilst minimizing haze. Furthermore, due to its effective reduction in viscosity, DISPERBYK-2200 enables an increase in the pigment content of organic pigments in pigment concentrates. When stabilizing carbon blacks, DISPERBYK-2200 creates a considerably greater level of jetness.

Recommended Use

Automotive coatings	■
Wood and furniture coatings	■
Industrial coatings	■

■ especially recommended

Recommended Levels
Additive dosage (as supplied) based upon pigment:

Inorganic pigments: 2-7 %
Organic pigments: 15-30 %
Carbon blacks: 35-70 %

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

Incorporation and Processing Instructions
DISPERBYK-2200 can be used in different ways in the dispersing process.

Depending on the chosen dispersing parameters (pigment type, pigment content, additive dosage), DISPERBYK-2200 can be used without first being dissolved in organic solvents or in a grinding resin. The wetting and dispersing additive as well as the pigments are added to the millbase. The dispersing process can then be started without the prior homogenization of the additive in the millbase. Due to the prevailing temperatures in the dispersing process, DISPERBYK-2200 dissolves in the millbase within just a few minutes.

In cases where the chosen dispersing parameters do not permit the direct use of DISPERBYK-2200 without first dissolving it, it is recommended that the additive is used by dissolving it in a grinding resin. For this purpose, the grinding resin and/or additional solvents are pre-mixed with the additive whilst stirring, and homogeneously distributed before the pigment is added.

The solubility of DISPERBYK-2200 is significantly dependent on the type of organic solvent or solvent blend that is being used. This is why concentrated solutions of DISPERBYK-2200 in organic solvents (> 40 % mass portion) should be used immediately after their manufacture.

Powder Coatings

Special Features and Benefits
On account of the delivery form, DISPERBYK-2200 is suitable for use in powder coatings. It is especially recommended for an optimized dispersion of carbon black pigments. The optical properties of the coating (DOI = distinctness of image) are improved. In addition, DISPERBYK-2200 brings about an improved degassing of powder coatings.

Recommended Levels
0.5-2 % 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 additive is mixed with resin, hardener, pigments and other raw materials in a high-speed mixer and then extruded. Good dispersion of the additive by the extruder promotes gloss and leveling of the powder coating and prevents the formation of craters, fish eyes, and seeds.

Special Note
The additive should always be used in combination with a standard leveling additive.

Printing Inks

Special Features and Benefits
DISPERBYK-2200 is particularly recommended for the manufacture of non-polar to medium-polarity solvent-borne pigment concentrates and printing inks. It improves the color strength and transparency of the grinds. The viscosity of the concentrate and printing inks is reduced.

Recommended Use
DISPERBYK-2200 is recommended for use in polyurethane and vinyl systems, in toluene gravure inks and laminating inks.

Recommended Levels
Additive dosage (as supplied) based upon organic pigments and carbon blacks:

Surface printing inks: 4-10 %
Laminating inks: 4-6 %

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

Incorporation and Processing Instructions
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In cases where the chosen dispersing parameters do not permit the direct use of DISPERBYK-2200 without first dissolving it, it is recommended that the additive is used by dissolving it in a grinding resin. For this purpose, the grinding resin and/or additional solvents are pre-mixed with the additive whilst stirring, and homogeneously distributed before the pigment is added.

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Inkjet applications

Special Features and Benefits
DISPERBYK-2200 is recommended for use in both solvent-borne drop-on-demand and also in continuous inkjet applications. Thanks to its outstanding deflocculation, DISPERBYK-2200 significantly improves pigment wetting and optical properties (color strength, transparency, gloss, haze). The viscosity both of the pigment concentrate as well as the final inkjet inks is reduced and thixotropic flow behavior prevented. In addition, it can achieve long-term stability without changing viscosity. The excellent deflocculating properties result in a very fine and close particle size distribution, whereby the filtration times of the inkjet inks are considerably reduced.

DISPERBYK-2200

Data Sheet
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Recommended Use

Drop-on-demand inkjet inks	■
Strong solvent inkjet inks	■
Mild solvent inkjet inks	■
Continuous inkjet inks	■

■ especially recommended

Recommended Levels

Additive dosage (as supplied) based upon pigment:

Organic pigments: 20-70 %
Carbon blacks: 30-90 %

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

Incorporation and Processing Instructions

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Additive Guide

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