

BYK-4510

Adhesion promoter for solvent-borne and aqueous systems on metallic substrates and glass.

Product Data

Composition

Solution of a hydroxy-functional copolymer with acidic groups

Typical Properties

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

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|--|-----------------|
| Acid value: | 30 mg KOH/g |
| Density (20 °C): | 1.12 g/ml |
| Non-volatile matter (10 min., 150 °C): | 80 % |
| Solvents: | Methoxypropanol |
| Flash point: | 48 °C |

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.

Applications

Coatings Industry

Special Features and Benefits

The acidic groups of the silicone-free adhesion promoter cause a strong affinity, particularly to metallic substrates, and improve adhesion on steel, galvanized steel, aluminum, non-ferrous metals, and even glass. BYK-4510 reacts with melamine resins and polyisocyanates and is thus incorporated into the polymer matrix. It is compatible with most binders and can therefore be applied universally.

Depending on the system, the additive can improve flexibility without reducing hardness. It can furthermore reduce the settling of inorganic pigments and fillers.

Storage stability of the paints, recoatability, and weather resistance of the coating are not negatively affected. The additive is stable even at high baking temperatures (briefly up to 280 °C) and does not cause yellowing.

Recommended Use

BYK-4510 is recommended for baking systems and two-pack polyurethane systems.

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|-------------------------------------|---|
| Industrial coatings | ■ |
| Coil coatings (on galvanized steel) | ■ |
| Protective coatings | ■ |

■ particularly recommended

Recommended Levels

1-5 % additive (as supplied) based upon total formulation.

The dosage levels are indicated for the purpose of orientation. Optimal dosage levels are determined through series of tests.

Incorporation and Processing Instructions

The additive is added to the letdown or the finished paint while stirring continuously.

In solvent-borne systems, the additive should be tested for compatibility beforehand in the non-pigmented formulation. Higher portions of polar solvents (alcohols, ester) reduce any possible turbidity.

For use in aqueous systems with less than 5 % co-solvent, the prior neutralization of the additive is recommended (65 % BYK-4510 with 3 % DMEA and 32 % water).

When using inorganic pigments, the gloss of the coat may be reduced if the pigments have not been sufficiently stabilized with a suitable wetting and dispersing additive before adding the adhesion promoter.