

RHEOBYK-440

Liquid rheology additive based on a polyamide to improve the anti-sagging and anti-settling properties as well as the effect pigment orientation in aqueous coating systems. Extremely shear-thinning.

Product Data

Composition

Solution of a modified polyamide

Typical Properties

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

Density (20 °C):	0.97 g/ml
Refractive index (20 °C):	1.475
Active substance:	25 %
Solvents:	Alicyclic amide
Flash point:	117 °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.

Storage and Transportation

To be stored and transported between 15 °C and 50 °C. Total shelf life of 18 months. Store the tightly sealed containers in a dry and well-ventilated location. The formation of gel that occurs during storage has no influence on the rheological effectiveness. Initial gelling of the product can be removed with light stirring. If the product is subjected to temperatures below 15 °C during storage or there is considerable gelling, it is recommended to warm the product up to 50 °C whilst stirring.

Applications

Coatings Industry

Special Features and Benefits

The additive is liquid and therefore easy to handle. With the help of pigments and fillers, it forms a three-dimensional network structure, and increases the viscosity above all in the low shear range. The strong shear-thinning properties simultaneously ensure an optimum handling and processability of the coating. The rapid structure recovery after shearing gives outstanding anti-sagging and anti-settling properties as well as an excellent effect pigment orientation.

RHEOBYK-440 is especially suitable for use in aqueous protective coatings based on epoxy dispersions, as well as for aqueous industrial coatings and automotive base coats.

Recommended Use

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

■ especially recommended □ recommended

Recommended Levels

0.2-2 % additive (as supplied) based on the total formulation, depending on the application area also
3-5 % 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

RHEOBYK-440 is preferably suitable for adding to the letdown stage, or as a post-additive to retroactively adjust the rheological properties. The efficiency of the additive can be reduced when used in the millbase. Addition under stirring ensures optimum distribution and the best possible effectiveness and reproducibility in applications. To achieve the full effect of the additive, an incorporation time of at least 5 minutes with medium shear forces is recommended. It is not necessary to adjust the pH value or control the temperature during incorporation.

Special Note

The assessment of the rheology should take place no sooner than 4 hours after incorporation, as the rheological effect does not develop immediately.



Additive Guide



BYK-Chemie GmbH
P.O. Box 10 02 45
46462 Wesel
Germany
Tel +49 281 670-0
Fax +49 281 65735

info@byk.com
www.byk.com

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