

BYK-420

Liquid rheology additive for aqueous and water-reducible coating systems for improving anti-sagging and anti-settling properties. The additive is also especially suited for manufacturing aqueous pigment concentrates. BYK-420 causes thixotropic flow behavior; post-addition is possible.

Product Data

Composition

Solution of a modified urea

Typical Properties

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

Density (68 °F): 9.35 lbs/US gal
Active substance: 52 %
Solvents: N-Methylpyrrolidon
Flash point: 203 °F

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

Moisture sensitive. Store dry. Slight turbidity of the material that occurs during storage has no influence on the rheological effectiveness.

Special Note

We recommend using BYK-410 for medium and BYK-411 for low-polarity, non-aqueous systems.

Applications

Coatings Industry

Special Features and Benefits

After being stirred into the coating system, the additive generates a three-dimensional network structure. The resulting thixotropic flow behavior is highly suited for preventing sedimentation and syneresis and increasing the anti-sagging properties without impairing leveling. The additive is liquid and therefore easy to handle. It is not necessary to specifically adjust the pH value or control the temperature during incorporation.

Recommended Use

BYK-420 is preferably used as an anti-settling additive to produce aqueous pigment, filler and matting agent concentrates. The additive's excellent shear thinning effect is advantageous for dosing such concentrates because of their low viscosity. In addition it is suitable for controlling the thixotropic flow behavior and to optimize the anti-sagging properties and leveling.

Recommended Levels

0.3-1.5 % additive (as supplied) based on the total formulation to prevent settling.

0.3-3 % additive (as supplied) based on the total formulation to prevent sagging.

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

Incorporation and Processing Instructions

Addition into the millbase ensures optimum distribution and therefore the best possible effectiveness and reproducibility in applications. It is not necessary to specifically control the temperature or adjust the pH value. The additive is suitable for adjusting the viscosity afterwards by incorporating it as a post-additive. If the use as a post-additive causes the product to appear non-homogeneous, typical co-solvents can be used to improve the homogeneity.

Special Note

As the additive contains chloride ions, we recommend testing the corrosion properties of the manufactured coatings for contact with metal and to store the coatings in plastic containers or containers with interior coating to prevent corrosion in metal containers. In the cured coating, however, no negative impact on its corrosion protection has been found.



Additive Guide



BYK USA Inc.
524 South Cherry Street
P.O. Box 5670
Wallingford, CT 06492
USA
Tel 203 265-2086
Fax 203 284-9158

cs.usa@byk.com
www.byk.com

ANTI-TERRA®, BYK®, BYK®-DYNWET®, BYK®-SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, DISPERBYK®, DISPERPLAST®, LACTIMON®, NANOBYK®, PAPERBYK®, SILBYK®, VISCOBYK®, and Greenability® are registered trademarks of BYK-Chemie. ACTAL®, ADJUST®, ADVITROL®, ASTRABEN®, BENTOLITE®, CLAYTONE®, CLOISITE®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, LAPONITE®, MINERAL COLLOID®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PURE THIX®, RHEOCIN®, RHEOTIX®, RIC-SYN®, TIXOGEL®, and VISCOSEAL® are registered trademarks of BYK Additives. AQUACER®, AQUAMAT®, AQUATIX®, CERACOL®, CERAFAX®, CERAFLOUR®, CERAMAT®, CERATIX®, HORDAMER®, and MINERPOL® are registered trademarks of BYK-Cera. SCONA® is a registered trademark of BYK Kometra.

The information and data stated herein, although in no way guaranteed, are based upon tests and reports considered to be reliable and are believed to be accurate. No warranty, either expressed or implied, is made or intended. Use by a customer should be based upon their own investigations and appraisals. Any recommendation should not be construed as an invitation to use a material in infringement of patents. This issue replaces all previous versions – Printed in the USA