

## 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

High molecular-weight copolymer with pigment affinic groups

#### Typical Properties

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

Amine value: 48 mg KOH/g  
Density (68 °F): 8.76 lbs/US gal

#### Food Contact Legal Status

For the current food contact legal status, please contact our product safety department or visit [www.byk.com](http://www.byk.com) for further information.

#### Storage and Transportation

Separation or turbidity may occur at temperatures below 10 °C (50 °F). Warm to 60 °C (140 °F) 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.

## BYK-9077

Data Sheet  
Issue 02/2014

### Recommended Levels

Amount of additive (as supplied) based upon pigment:

Inorganic pigments:	5-10 %
Titanium dioxides:	1-3 %
Organic pigments:	10-25 %
Carbon blacks:	15-50 %

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

### Incorporation and Processing Instructions

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

## SMC and pultrusion

### Special Features and Benefits

BYK-9077 is recommended for stabilizing organic pigments and particularly basic carbon blacks.

### 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. Optimal levels are determined through a series of laboratory tests.

### Incorporation and Processing Instructions

For optimum performance, the additive should be added to the resin mixture before homogenization and before the addition of solids.

## Ambient curing resin systems

### 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. 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.

## 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. Optimal levels are determined through a series of laboratory tests.

### Incorporation and Processing Instructions

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

# BYK-9077

Data Sheet  
Issue 02/2014



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/additives](http://www.byk.com/additives)**

ACTAL®, ADJUST®, ADVITROL®, ALUFERSOL®, ANTI-TERRA®, BENTOLITE®, BYK®, BYK®-DYNWET®, BYK®-SILCLEAN®, BYKANOL®, BYKETOL®, BYKJET®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CLAYTONE®, CLOISITE®, COPISIL®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, FULGEL®, FULMONT®, GARAMITE®, GELWHITE®, LACTIMON®, LAPONITE®, MINERAL COLLOID®, NANOBYK®, OPTIBENT®, OPTIFLO®, OPTIGEL®, PAPERBYK®, PERMONT®, PURE THIX®, RHEOCIN®, RHEOTIX®, RIC-SYN®, SILBYK®, TIXOGEL®, VISCOBYK®, Y-25®, and Greenability® are registered trademarks of BYK-Chemie. AQUACER®, AQUAMAT®, AQUATIX®, CERACOL®, CERAFAK®, 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