Substance for Success.

Product Guide CM-PG 1

Additives for Sheet Molding Compounds (SMC)
Incorporation of fillers increases paste viscosity. BYK wetting and dispersing additives facilitate the incorporation of fillers and lower paste viscosity.

As a result, higher filler loading is possible. Lower viscosity improves and speeds up the wetting of the glass fibers.

The Wetting and Dispersing Process

Lower Viscosity, Higher Filler Load

Application Fields and Dosages

<table>
<thead>
<tr>
<th></th>
<th>Low emission</th>
<th>LP Class A</th>
<th>LP</th>
<th>LS</th>
<th>HMC fire retardant</th>
</tr>
</thead>
<tbody>
<tr>
<td>BYK-W 980</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1-2%</td>
</tr>
<tr>
<td>BYK-W 995</td>
<td></td>
<td></td>
<td></td>
<td>1-2%</td>
<td>1-2%</td>
</tr>
<tr>
<td>BYK-W 996</td>
<td>1-2%</td>
<td>1-2%</td>
<td>1-2%</td>
<td>0.5%</td>
<td>1-2%</td>
</tr>
<tr>
<td>BYK-W 9010</td>
<td>0.5-1%</td>
<td>0.5-1%</td>
<td>0.5-1%</td>
<td>0.5-1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>BYK-W 9011</td>
<td>0.5-1%</td>
<td>0.5-1%</td>
<td>0.5-1%</td>
<td>0.5-1%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

% based on filler
Processing Additives

To improve pigmentability in LS-formulations, processing additives are used. Due to their excellent release properties, they replace the stearates completely.

<table>
<thead>
<tr>
<th>Processing Additives</th>
<th>LS</th>
<th>LP Class A</th>
<th>LP</th>
</tr>
</thead>
<tbody>
<tr>
<td>BYK-P 9060</td>
<td>3-4 phr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BYK-P 9065</td>
<td>2-2.5 phr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BYK-P 9080</td>
<td>4-5 phr</td>
<td>4-5 phr</td>
<td></td>
</tr>
</tbody>
</table>

Pigmentation

Without processing additive

With BYK-P 9060 or BYK-P 9065

Processing Additives Drastically Improve Surface Appearance

Electrical cabinet formulation without additive

Electrical cabinet formulation with processing additive

BYK-P 9080 Drastically Reduces Long-Term Waviness

Without additive

With BYK-P 9080
BYK-P 9065 – The Concept of a Multifunctional Processing Additive

BYK-P 9065 – Significantly Improved Surface Quality of Molded Parts
Anti-Separation Additives

Shrinkage control additives such as PS or SBS are incompatible with the UP resin and can cause phase separation in the paste. The use of BYK additives helps to compatibilize both phases and stabilize the paste during storage and processing.

<table>
<thead>
<tr>
<th>Anti-Separation Additives</th>
<th>LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BYK-9076</td>
<td>0.3-1 phr</td>
</tr>
<tr>
<td>BYK-W 972</td>
<td>0.5-1 phr</td>
</tr>
<tr>
<td>BYK-W 974</td>
<td>0.3-1 phr</td>
</tr>
</tbody>
</table>

UP & LS-Resin with Filler and Pigment

![Without additive](image1)

![With BYK additive](image2)

Fiber Wetting

Application Fields and Dosages

<table>
<thead>
<tr>
<th></th>
<th>Glass fibers</th>
<th>Carbon fibers</th>
</tr>
</thead>
<tbody>
<tr>
<td>BYK-9076</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>BYK-515</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>BYK-A 560</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>BYK-W 972</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

% based on fiber content
Products and Applications

BYK Additives

Product Range Additives:

• Additives to improve surface slip, leveling and substrate wetting
• Adhesion promoters
• Defoamers and air release agents
• Foam stabilizers
• Processing additives
• Rheological additives
• UV-absorbers
• Viscosity depressants
• Waxes
• Wetting and dispersing additives for pigments and extenders

Application Areas:

Coatings Industry
• Architectural Coatings
• Automotive Coatings
• Industrial Coatings
• Can Coatings
• Coil Coatings
• Wood & Furniture Coatings
• Powder Coatings
• Leather Finishes
• Protective & Marine Coatings

Plastics Industry
• Ambient Curing Systems
• PVC Plastisols
• SMC/BMC
• Thermoplastics

PUR Industry
• C.A.S.E. Applications
• PUR Foams

Printing Ink Industry
• Flexo Inks
• Gravure Inks
• Silk Screen Inks
• Offset Inks
• Overprint Varnishes

Paper Coatings
• Impregnation
• Coatings

Adhesives & Sealants

Construction Chemicals

Pigment Concentrates

Raw Materials for Manufacturing of Release Agents

BYK Instruments

BYK offers a complete line of testing instruments to meet your needs in many application areas:

• Gloss/Appearance
• Color

Portable or stationary laboratory equipment – including easy-to-use quality control software.

BYK instruments – the complete solution for the coatings and plastics industry.

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This issue replaces all previous versions – printed in Germany.