CREATING TOMORROW’S SOLUTIONS

PEP UP YOUR POLYOLEFIN COMPOUNDS
GENIOPLAST® additives are suitable for a wide range of applications. Our specialty grade GENIOPLAST® Pellet P Plus has been developed for food packaging, caps and closures.
This unique combination of high-viscosity silicone gum and a specially modified silica provides optimum efficiency together with universal compatibility in thermoplastics. GENIOPLAST® Pellet S and Pellet P Plus provide unique processing benefits and improve surface quality. In contrast to many other additives, GENIOPLAST® Pellet S and Pellet P Plus do not negatively affect physical properties, such as tensile and impact strength. In mineral-filled compounds, GENIOPLAST® Pellet S and Pellet P Plus actually enhance impact strength and provide a synergistic effect with flame-retardant additives.

Two Grades for All Your Needs
GENIOPLAST® Pellet S provides solutions for technical applications. In addition, GENIOPLAST® Pellet P Plus is suitable for food-contact applications.

<table>
<thead>
<tr>
<th>GENIOPLAST® Pellet S and Pellet P Plus Enhance Productivity</th>
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<tr>
<td><strong>Addition of 0.1 – 1%</strong></td>
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<td>Improves the processing and flow for the compounder and the downstream processor</td>
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<tr>
<td>Reduces extruder torque and die pressure</td>
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<td>Significantly increases throughput</td>
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<td>Reduces deposits</td>
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Technical polyolefin compounds are extremely versatile and are increasingly used in areas such as cables, appliances, consumer electronics and packaging. GENIOPLAST® Pellet S and Pellet P Plus make a contribution in all of these applications.

**GENIOPLAST® Pellet S in Cable Compounds**

Today, new and better cable compounds for data transmission, telecommunication and low-voltage cables are being developed on the basis of polyethylene (PE) or ethylene copolymers. These compounds are rendered flame retardant by means of halogen-free flame-retardant fillers, such as aluminum hydroxide (ATH). In halogen-free flame-retardant cable compounds (HFFR), GENIOPLAST® Pellet S significantly improves processing, flow, surface, and mechanical properties as shown in the following diagrams. Furthermore, deposits on the die and in the extruder itself are reduced and flame retardant properties are synergetically improved.

**GENIOPLAST® Pellet S in ACP**

Composite panels made of aluminum (ACP) contain a core made of a thermoplastic such as polyethylene or polypropylene to which fire-retardant filler such as aluminum or magnesium hydroxide has been added. In such highly filled compounds, GENIOPLAST® Pellet S simplifies processing, even at dosages of less than 1%. In addition, raising the concentration to 1% to 3% improves surface properties and fire resistance.

**A Wealth of Potential Applications**

The use of GENIOPLAST® Pellet S and Pellet P Plus in polyolefin compounds is not limited to cables and appliances. The combination of benefits that GENIOPLAST® imparts to polyolefin compounds as a performance additive also improves compounds for other technical applications, such as for piping, extruded film and sheeting, as well as highly mineral-filled compounds. Likewise, FDA-compliant GENIOPLAST® Pellet P Plus enhances compounds for flexible and rigid food packaging, caps and closures.

### Additives
- GENIOPLAST® Pellet S
- GENIOPLAST® Pellet P Plus (food compliant)

### Dosage
- 1 – 5%

### Applications
- Cables
- Appliances
- Consumer electronics
- Food packaging, caps and closures

### Key Benefits
- Higher throughput
- No die drool
- Better scratch and abrasion resistance
- Better flow
- Improved flame retardancy
**Base polymer**

- **EVA/ATH (70%)**
  - Tensile Strength [%]
  - Elongation at Break [%]
  - Shore D Hardness [%]
  - Increase in Melt Flow Index [%]
  - Throughput Increase [%]
  - Decrease in CoF [%]
  - Decrease in Torque [%]
  - Decrease in Die Pressure [%]
  - Increase of LOI [%]

- **HDPE/CaCO₃ (40%)**
  - Improvement in Taber Abrasion [%]
  - Tensile Strength [%]
  - Elongation at Break [%]
  - Shore D Hardness [%]
  - Increase in Melt Flow Index [%]
  - Decrease in CoF [%]
  - Decrease in Torque [%]
  - Increase in Melt Flow Index [%]

- **PP/CaCO₃ (40%)**
  - Improvement in Taber Abrasion [%]
  - Tensile Strength [%]
  - Elongation at Break [%]
  - Shore D Hardness [%]
  - Increase in Melt Flow Index [%]
  - Decrease in CoF [%]
  - Decrease in Torque [%]
  - Impact Strength [%]

- **LDPE/ATH (60%)**
  - Improvement in Taber Abrasion [%]
  - Tensile Strength [%]
  - Elongation at Break [%]
  - Shore D Hardness [%]
  - Increase in Melt Flow Index [%]
  - Decrease in CoF [%]
  - Decrease in Torque [%]
  - Impact Strength [%]

- **TPO/BaSO₄ (80%)**
  - Tensile Strength [%]
  - Elongation at Break [%]
  - Shore D Hardness [%]
  - Increase in Melt Flow Index [%]
  - Decrease in CoF [%]
  - Decrease in Current Consumption [%]
  - Decrease in Torque [%]

**+1.0% GENIOPLAST® Pellet S**
The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies’ raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties’ rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.