

### CREATING TOMORROW'S SOLUTIONS



PLASTICS I PERFORMANCE ADDITIVES

## TAKE YOUR THERMOPLASTIC ELASTOMERS TO THE NEXT LEVEL





## GENIOPLAST<sup>®</sup> PELLET S, PELLET P PLUS AND PELLET 345

Three grades for all your needs: GENIOPLAST<sup>®</sup> Pellet S provides solutions for technical applications. In addition, GENIOPLAST<sup>®</sup> Pellet P Plus is suitable for food-contact applications. GENIOPLAST<sup>®</sup> Pellet 345 is a pelletized silicone copolymer and has been specifically designed for TPU (thermoplastic polyurethane) applications.

GENIOPLAST<sup>®</sup> is a registered trademark of Wacker Chemie AG.

## UPGRADE THE PERFORMANCE OF THERMOPLASTIC ELASTOMERS (TPEs)

Thermoplastic elastomers consist of styrene block copolymers, polyolefins blends, elastomeric alloys, thermoplastic polyurethanes, copolyester and polyamides. Due to the unique combination of "thermoplastic" and "elastomeric" properties, these materials are often used in applications such as automotive parts, shoe soles and medical devices.

### GENIOPLAST<sup>®</sup> Pellet S and Pellet P Plus for Lower Friction and Better Abrasion Resistance of TPEs

Styrene based TPEs (SBS, SEBS) and TPUs are widely used for shoe sole applications. Here, GENIOPLAST® Pellet S helps to improve abrasion and to modify friction while not negatively contributing to adhesion of the outer sole to the inner sole and fabric. GENIOPLAST® Pellet S and Pellet P Plus are also successfully applied in TPEs for flooring applications and for medical devices. The following diagrams illustrate how GENIOPLAST® Pellet S improves processing and surface properties in different TPEs.

### GENIOPLAST<sup>®</sup> Pellet 345 for Better Mold Release and for Soft Touch of TPU

GENIOPLAST<sup>®</sup> Pellet 345 is a pelletized silicone copolymer and has been specifically designed for TPU applications. When 1 – 2% of it is applied in TPU compounds, mold release properties can be improved and stickiness can be significantly reduced. If added at 10% and higher, GENIOPLAST<sup>®</sup> Pellet 345 reduces shore hardness and provides a smooth surface and unique soft touch properties.

# **A**dditives

- AUUILIVES
- GENIOPLAST<sup>®</sup> Pellet
  GENIOPLAST<sup>®</sup> Pellet P
- Plus (food compliant)
- GENIOPLAST® Pellet 345



**Dosage** 1 – 10%

### **C** Applications

- Shoe soles
- Automotive parts
- Medical devices
- Consumer electronics and wearables

## Key Benefits

- Lower friction
- Improved abrasion resistance
- Soft and dry touch and feel
- Better flow
- Higher throughput



### TPO/Talc (20%)







#### TPU 200 T Tensile Strength [%] $_{\lambda}$ Elongation at Break [%] Improvement in 150 Taber Abrasion [%] 100 50 Decrease in Shore D H CoF [%] Hardness [%] Decrease in Increase in Melt Flow Die Pressure [%] Index [%] ⊥ Decrease in Torque [%] TPU 📕 +1.0% GENIOPLAST<sup>®</sup> Pellet S





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