TECHNICAL DATA SHEET
Polypropylene with GP500 graphene, 1 wt.%

GrapheneTech offers a thermoplastic with graphene targeted at industrial applications. This polypropylene is manufactured using melt compounding process, getting a uniform distribution of Graphene [1% w/w] and ensuring well bonded and dispersed graphene in polymer matrix. This composite could be used to produce final pieces or as an additive to improve the general properties of the products based on propylene or to incorporate it in mixtures of different polymers.

Product Technical Specifications

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Black Granules</th>
<th>Heavy Metals</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melt Temperature (°C)</td>
<td>170 °C</td>
<td>Heat Stability (°C)</td>
<td>280 °C</td>
</tr>
<tr>
<td>Density</td>
<td>0,906 g/cm³</td>
<td>Melt Flow Index</td>
<td>3,89 g/10min (230 °C /2,16 kg)</td>
</tr>
<tr>
<td>% Solids</td>
<td>100%</td>
<td>Light Fastness (level)</td>
<td>8</td>
</tr>
</tbody>
</table>

*Light Fastness: (8 = best, 1 = worst)*

Main Application: Extrusion, Blow molding and Injection molding

Recommended Usage

The optimum loading level for each particular end use will be selected by processors.

Characteristics

With a 1%w/w of GP500 graphene in the polymer composition it is achieved:

- Similar tensile strength
- An increase of 174% in elongation to break
- A decrease of 44% in Young’s modulus
- No modification of Charpy Impact Strength
- An increase of 3°C in HDT (Heat Deflection Temperature)
Properties of GP500 graphene polypropylene matrices

**Storage and Handling**

This product should be stored in a closed containers at room temperature and in clean and stable environment. The responsibility of the storage in unsuitable conditions or their contamination would not be assumed by GrapheneTech.

**Health and Safety**

For safe use of this product, please review datasheet (MSDS) of product.