Conductive and Anti-static Compounds

Fluon+™ Conductive and Anti-static Compounds are made with fluoropolymer resins and carbon black, and are used for control of heat and static electricity.

From anti-static to highly conductive, these compounds are manufactured as ready-to-use products. Typical customization of products includes melt flow rate of final compound and conductivity level needed for the application. Flexible, cross-linkable and adhesive options are also available. Consistency and processability are the key factors in developing these compounds.

### Common Products

<table>
<thead>
<tr>
<th>Resin</th>
<th>PFA</th>
<th>MFA</th>
<th>FEP</th>
<th>ETFE</th>
<th>PVDF</th>
<th>ECTFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductive &amp; Anti-static</td>
<td>Standard</td>
<td>Custom</td>
<td>Custom</td>
<td>Standard</td>
<td>Custom</td>
<td>Custom</td>
</tr>
</tbody>
</table>

### Typical Physical Properties Measured

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Units</th>
<th>Typical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>FP-PC-1600S</td>
</tr>
<tr>
<td>Base Resin</td>
<td></td>
<td>-</td>
<td>PFA</td>
</tr>
<tr>
<td>Melt Flow Rate</td>
<td>ASTM D-1238</td>
<td>g/10 minutes</td>
<td>6</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>ASTM D-1895</td>
<td>g/L</td>
<td>1180</td>
</tr>
<tr>
<td>Moisture Content</td>
<td>AGC Internal</td>
<td>%</td>
<td>&lt;0.09</td>
</tr>
<tr>
<td>Surface Resistivity</td>
<td>AGC Internal</td>
<td>Ω/square</td>
<td>6300</td>
</tr>
<tr>
<td>Volume Resistivity</td>
<td>AGC Internal</td>
<td>Ω - cm</td>
<td>4.2</td>
</tr>
</tbody>
</table>

### Typical Applications

- Self-regulating or constant wattage heater cable
- Static dissipative fuel lines
- Hose and tubing
- Films and sheets
- Electrical components

### Processing Techniques

- Extrusion
- Injection molding
Surface Resistivity as a Function of Carbon Content, ETFE MFR

The graph in Figure 1 shows conductivity as a function of carbon content and ETFE base resin. Product conductivity performance can be tailored to the application and the customer’s process.

![Graph showing surface resistivity as a function of increasing carbon content.](image)

**Figure 1.** Compound conductivity as a function of carbon content and ETFE resin melt flow rate.

Contact your AGC Chemicals commercial representative for more information on specific grades or for technical datasheets.

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**AGC Chemicals Americas, Inc.**
55 E. Uwchlan Avenue, Suite 201
Exton, PA 19341
United States of America

Telephone: +1 610-423-4300
Toll Free (US only): 800-424-7833
Fax: +1 610-423-4305

[www.agcchem.com](http://www.agcchem.com)
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