The automotive industry faces a critical innovation challenge as EVs evolve: developing high-voltage components that are reliable and durable. To meet this need, DuPont's AHEAD™ (Accelerating Hybrid-Electric Autonomous Driving) initiative introduces new DuPont™ Zytel® and DuPont™ Crastin® materials in stable orange that provide high performance and safety.

The safety of EV drivetrains demands plastic solutions that are reliable in high-voltage applications and durable for the long run. Zytel® and Crastin® orange materials are ideal for high-voltage terminals and connectors, busbars, and high-voltage switches and relays.

**Crastin® PBT Solutions**

Orange Crastin® PBT is available in multiple grades, including hydrolysis-resistant and flame-retardant/non-halogenated versions. Crastin® PBT provides excellent color stability above 140°C and electrical properties up to 160°C.

**The Zytel® PA66 Solution**

Orange Zytel® PA66 is a flame-retardant, non-halogenated material that delivers good color stability up to 130°C. It is the manufacturers' material of choice due to its impact strength and high elongation at break. Zytel® PA66 is ideal for busbars and large terminals subject to high thermal shocks.

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### Orange Portfolio Features by Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>Details</th>
<th>Enhanced hydrolysis resistance vs other grades</th>
<th>FR</th>
<th>CTI</th>
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<tbody>
<tr>
<td>CRAFR684NH1 OR162</td>
<td>PBT-GF15 FR(40) – Similar to Pantone 1505C / RAL2008</td>
<td>V-0 at 0.8 mm</td>
<td>600 V</td>
<td></td>
</tr>
<tr>
<td>CRAFR684NH1 OR162</td>
<td>PBT-GF25 FR(40) – Similar to Pantone 1505C / RAL2008</td>
<td>V-0 at 0.4 mm</td>
<td>600 V</td>
<td></td>
</tr>
<tr>
<td>CRAFR684NH1 OR168</td>
<td>PBT-GF25 FR(40) – Similar to RAL2003</td>
<td>V-0 at 0.4 mm</td>
<td>600 V</td>
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<tr>
<td>CRAFRHR5325NH OR162</td>
<td>PBT-GF25 FR(40) – Similar to Pantone 1505C / RAL2008</td>
<td>V-0 at 0.4 mm</td>
<td>600 V</td>
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<tr>
<td>CRAHR5330HFS OR516</td>
<td>PBT-I-GF30 – Similar to RAL2003</td>
<td>HB</td>
<td>600 V</td>
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<tr>
<td>ZYTFR70G30V0NH1 OR169</td>
<td>PA66-GF30 FR(40) – Similar to RAL2003</td>
<td>V-0 at 0.8 mm</td>
<td>600 V</td>
<td></td>
</tr>
</tbody>
</table>

Source: DuPont

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### Crastin® FR684NH1 OR168

- **Similar to RAL 2003**

  - No obvious color shift after heat aging under 90°C / 120°C / 140°C
  - $\Delta E_{cmc} = 0.7$ after 90°C 1000 hour heat aging
  - $\Delta E_{cmc} = 1.5$ after 120°C 1000 hour heat aging
  - $\Delta E_{cmc} = 2.7$ after 140°C 1000 hour heat aging

### Zytel® FR70G30V0NH1 OR169

- **Similar to RAL 2003**

  - No obvious color shift after heat aging under 110°C / 120°C / 130°C
  - $\Delta E_{cmc} = 1.08$ after 110°C 1000 hour heat aging
  - $\Delta E_{cmc} = 1.97$ after 120°C 1000 hour heat aging
  - $\Delta E_{cmc} = 3.62$ after 130°C 1000 hour heat aging

Source: DuPont
Cost-Effective, High Performance Materials

Orange Crastin® and Zytel® products comply with OEM specifications. Designers and engineers rely on this family of innovative plastics for:

- stable orange color at elevated temperatures
- hydrolysis-resistance, high mechanical properties, and resistance to thermal shock for extended component life
- a maximum tracking index (600V) and high flow for miniaturization and design flexibility
- high dielectric strength over temperature for increased safety
- fully-compounded orange materials with minimum outgassing and corrosion as well as a wide processing window
- laser marking capability for easy part traceability

For more information, contact your DuPont representative.