POKETONE (Polyketone) What is it?

- Manufactured in Seoul, South Korea by Hyosung – Currently 110 Million lbs. per year of capacity with capacity authorization to double the output per year by 2020.

- Competing Resins: All Nylons, PBT, POM (Acetal)

- Performance:
  - High Impact Strength – Impact/Fatigue (2X of POM)
  - Excellent Chemical Resistance – Automotive Fluids, Hydrocarbon Solvents, Salts
  - Excellent Wear Resistance – Wear and Friction better than POM
  - Exceptional Barrier Properties – Gasoline, Diesel (2X of PA12)
  - Good Flame Retardancy – Only half of flame retardant is necessary to meet UL V-0 Rating
  - Stable Dimensions – After 24 hours and in Moisture Environments

- Markets:
  - Automotive – Radiator End Tanks, Junction Box, Clip Holders, Cable Box, Fuel Tank Fuel Doors, Fuel Line, Connector, Wheel Cover
  - Electrical/Electronics – Electrical Switch, Gears, Connectors, CDU Stacker, Refrigerator Door Closer
  - Appliance – Water Meter, Water Filtration System, Pump Housings, and Water Filters
  - Industrial – Rail Fastening System, Conveyor Belts, Cosmetic Containers, Industrial Wheels, Helmet Components, Cable Ties, Oil Seal, Pipe and Tubing
  - Medical – Equipment Housings

- Injection Molders Benefits: Easy Mold Ability
  - Short Cycle Times – Low Clamp-force Requirements
  - Easy Drying – (Not Sensitive to Humidity) – Superior Flow Ability

- Glass Transition Temp, T_g, °C
- Crystalline Melting Pt, T_m, °C
- HDT, 66 psi (0.45 MPa), °C
- HDT, 264 psi (1.8 MPa), °C
- Specific Gravity
- Moisture Absorption, 24hr/23 °C
- Dimensional Change, 24hr/23 °C H₂O
- Mold Shrinkage, in/in

<table>
<thead>
<tr>
<th>Property</th>
<th>PP</th>
<th>POM</th>
<th>POK</th>
<th>PA6</th>
<th>PA66</th>
<th>PBT</th>
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<tbody>
<tr>
<td>Glass Transition Temp, T_g, °C</td>
<td>-35</td>
<td>-30</td>
<td>15</td>
<td>47</td>
<td>50</td>
<td>66</td>
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<tr>
<td>Crystalline Melting Pt, T_m, °C</td>
<td>168</td>
<td>177</td>
<td>210</td>
<td>223</td>
<td>275</td>
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<tr>
<td>HDT, 66 psi (0.45 MPa), °C</td>
<td>104</td>
<td>156</td>
<td>205</td>
<td>160</td>
<td>200</td>
<td>154</td>
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<tr>
<td>HDT, 264 psi (1.8 MPa), °C</td>
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<td>101</td>
<td>105</td>
<td>54</td>
<td>70</td>
<td>54</td>
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<tr>
<td>Specific Gravity</td>
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<td>1.41</td>
<td>1.24</td>
<td>1.14</td>
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<tr>
<td>Moisture Absorption, 24hr/23 °C</td>
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<td>0.3</td>
<td>1.2</td>
<td>1.2</td>
<td>0.25</td>
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<td>Dimensional Change, 24hr/23 °C H₂O</td>
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<td>0.0</td>
<td>0.2</td>
<td>3.0</td>
<td>2.7</td>
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<td>Mold Shrinkage, in/in</td>
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<td>0.020</td>
<td>0.020</td>
<td>0.016</td>
<td>0.018</td>
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