## KyronMAX™ S-4340

**PRODUCT TECHNICAL DATA SHEET**

### Product Benefits
- Formulated to have a higher Tg than PEEK
- Ideal for high-temp applications
- High stiffness
- High thermal resistance
- Low moisture absorption
- Low swell
- Chemical resistance

### Industries/Application Examples
- Automotive – bushings, washers, pistons, brackets, handles
- Aerospace – latches, rings, hinges, spacers, seals, adapters
- Electrical – pins, fasteners, end effectors, connectors, panels
- Medical – clamps, vanes, housings, bushings, gears, valves
- Energy – seals, bearings, plugs, umbilicals, back-up rings
- Industrial – valve plates, column packing, gears, valve seats

<table>
<thead>
<tr>
<th>MECHANICAL</th>
<th>Test Method</th>
<th>Typical Value</th>
<th>Unit</th>
<th>Typical Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Density</td>
<td>ASTM D792</td>
<td>1.40</td>
<td>g/cm³</td>
<td>1.40</td>
<td>g/cm³</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM D638</td>
<td>51,000</td>
<td>psi</td>
<td>352</td>
<td>MPa</td>
</tr>
<tr>
<td>Tensile Modulus of Elasticity</td>
<td>ASTM D638</td>
<td>6,700</td>
<td>ksi</td>
<td>46</td>
<td>GPa</td>
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<tr>
<td>Tensile Elongation</td>
<td>ASTM D638</td>
<td>1.10</td>
<td>%</td>
<td>1.10</td>
<td>%</td>
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<tr>
<td>Flexural Strength</td>
<td>ASTM D790</td>
<td>75,000</td>
<td>psi</td>
<td>517</td>
<td>MPa</td>
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<tr>
<td>Flexural Modulus of Elasticity</td>
<td>ASTM D790</td>
<td>5,300</td>
<td>ksi</td>
<td>37</td>
<td>GPa</td>
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<tr>
<td>Notched Izod Impact</td>
<td>ASTM D256</td>
<td>1.6</td>
<td>ft-lb/in</td>
<td>82</td>
<td>J/m</td>
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<tr>
<td>Unnotched Izod Impact</td>
<td>ASTM D4812</td>
<td>13</td>
<td>ft-lb/in</td>
<td>689</td>
<td>J/m</td>
</tr>
</tbody>
</table>

| THERMAL                     |             |               |      |               |      |
| Glass Transition (Tg)       | ASTM D3418  | 275           | °F   | 135           | °C   |
| Melting Point               | ASTM D3418  | 582           | °F   | 305           | °C   |

| ELECTRICAL                  |             |               |      |               |      |
| Flammability                | UL 94¹      | HB            |      | HB            |      |

| CHEMICAL                    |             |               |      |               |      |
| Moisture, 24 hours          | ASTM D570   | 1.75          | % by wt | 1.75 | % by wt |
KyronMAX™ materials are lightweight and, when molded, parts are 75% lighter than steel and almost 40% lighter than aluminum. By utilizing the lower density of KyronMAX, customers can simultaneously realize lower costs and lighter parts, while also taking advantage of unmatched tensile and toughness properties.

The better “practical toughness” values are achieved with lower filler loading, which increases the material’s elongation at yield. KyronMAX molded parts are more likely to yield, rather than fracture under high-stress loads. KyronMAX stronger fibers and lower filler loadings further elevate molded product performance with significantly better knit line strength compared to other filled polymers.

Aluminum bracket with half FEA analysis (left) and KyronMAX final molded part (right). The FEA analysis is used to translate a metal part into a lightweight plastic molded part, while matching or exceeding the strength and stiffness of the original metal part.

Mitsubishi Chemical Advanced Materials (MCAM) can take your metal parts and use our proprietary Finite-Element Analysis (FEA) to engineer a high-performance product with KyronMAX materials. MCAM’s unique FEA data offers a solution to accurately predict the mechanical performance of a part in real world applications with key features including mechanical stress, plastic injection molding flow, fatigue, and motion.

USA – Arizona
257 East Alamo Drive
Chandler, AZ 85225 USA
Tel: 480.926.8100
Fax: 480.497.1530
KyronMAX@mcam.com

USA – Illinois
1840 Enterprise Court
Libertyville, IL 60048 USA
Tel: 847.367.0110
Fax: 847.367.0566

Asia – Thailand/Singapore
Eastern Seaboard Industrial Estate
Rayong 64/103, Moo 4, T. Pluakdaeng
A. Pluakdaeng, Rayong 21140 Thailand
Tel: +66 33 659 141
Fax: +66 33 659 143

https://mcam.com

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1 Does not represent actual testing conducted by MCAM but is an estimated rating based on available data. The UL 94 Test is a laboratory test and does not relate to actual fire hazard.