Trends
In addition to extreme resistance to steam and chemical sterilisation, today's medical device designs require exceptional physical performance that can help deliver the extended product life to meet conscious users demand.

Quadrant Answers
Quadrant® LSG PPSU is an outstandingly tough engineering plastic with a temperature of deflection under load of about 205 °C, excellent chemical resistance, dimensional stability and the ability to withstand more than 1,000 cycles of steam sterilisation without significant loss of properties. It is highly resistant to cleaning agents, disinfectants and various solvents, as well as to gamma radiation.

Customer Benefits
Quadrant delivers unique LSG PPSU materials for machining which were tested on stock shapes in order to check their compliance with requirements for biocompatibility of materials per United States Pharmacopeia (USP) and ISO 10993-1. This offers the designer increased safety, approval facilitation, as well as reduced cost and time to market. Many standard colours including blue, grey, natural, black, red, green, orange, rust and yellow are offered as rod and plate. Various combinations of shape sizes provide manufacturers an ideal yield with minimal waste.

Properties of Quadrant® LSG PPSU by Quadrant
- Superior resistance to common sterilisation techniques compared to other engineering plastics
- Extremely high resistance to repeated steam sterilisation
- High resistance to gamma radiation
- Tested biocompatibility per USP and ISO 10993-1 on stock shapes
- Excellent dimensional stability
- Very high impact strength
- Excellent machinability
- Lot traceability
**Typical applications**
- Trial implants
- Medical instruments
- Endoscopic equipment
- Radiation therapy and brachytherapy components
- Trays for trauma products
- Biotechnology and laboratory equipment
- Analytical and diagnostic equipment

**Biocompatibility status of Quadrant® LSG PPSU grades:**

<table>
<thead>
<tr>
<th>TESTS</th>
<th>(1)</th>
<th>(2)</th>
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<tbody>
<tr>
<td>1. Cytotoxicity</td>
<td>✔</td>
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<tr>
<td>2. Sensitization</td>
<td>✔</td>
<td>✔</td>
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<td>3. Intraocular Reactivity</td>
<td>✔</td>
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<td>4. Acute Systemic Toxicity</td>
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<td>5. Implantation Test</td>
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<td>6. Human blood compatibility</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>7. USP-Physicochemical Tests for Plastics</td>
<td>✔</td>
<td>✔</td>
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</tbody>
</table>

(2) Quadrant EPP performs testing on its Life Science Grades in order to facilitate evaluation by its customers of their biocompatibility with regard to the requirements applicable to the specific use of the finished product. Quadrant EPP does not possess expertise in evaluating the suitability of its tested materials for use in specific medical, pharmaceutical, or biotechnological applications. It remains the customer’s sole responsibility to test and assess the suitability of Quadrant’s Life Science Grades for its intended applications, processes and uses.

**MATERIALS**
- Quadrant® LSG PPSU black
- Quadrant® LSG PPSU natural (ivory)
- Quadrant® LSG PPSU blue, green, grey, orange, red, rust, yellow

Available in colours: natural (ivory), black, blue, green, grey, orange, red, rust, yellow, as rod and plate, and also as finished parts. Please consult us for availability of rod diameters and plate sizes.

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**You inspire … we materialize®**

More information: www.quadrantplastics.com