**TECHNICAL DATA**

**PR-1770 Class B High Strength Fuel Tank Sealant**

**Description**
PR-1770 Class B is a high strength, aircraft integral fuel tank sealant. It has a service temperature range from -67°F (-55°C) to 356°F (180°C). This material is designed for fillet sealing of fuel tanks and other aircraft fuselage sealing applications. The cured sealant maintains excellent elastomeric properties after prolonged exposure to both jet fuel and aviation gas.

PR-1770 Class B is a two-part, manganese dioxide cured Permapol® P-5 polysulfide compound. The uncured material is a low sag, thixotropic paste suitable for application by extrusion gun or spatula. It cures at room temperature to form a resilient sealant having excellent adhesion to common aircraft substrates.

The following tests are in accordance with AMS 3269 Class B specification test methods.

**Application Properties (Typical)**

<table>
<thead>
<tr>
<th>Color</th>
<th>Black</th>
<th>Light gray</th>
<th>Dark gray</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixing ratio</td>
<td>Part A:Part B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>By weight</td>
<td>10:100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accelerator viscosity</th>
<th>Poise (Pa-s)</th>
<th>890 (89)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Brookfield #7 @ 10 rpm),</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Base viscosity</th>
<th>Poise (Pa-s)</th>
<th>12,000 (1200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Brookfield #7 @ 2 rpm),</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Slump, inches (mm)</th>
<th>Initial 50 Minutes</th>
<th>90 Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1/2</td>
<td>0.15 (3.81)</td>
<td></td>
</tr>
<tr>
<td>B-2</td>
<td>0.10 (2.54)</td>
<td>0.20 (5.08)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Application life and cure time @ 77°F (25°C), 50% RH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application life (hours)</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>B-1/2</td>
</tr>
<tr>
<td>B-2</td>
</tr>
</tbody>
</table>

**Performance Properties (Typical)**

- Cured 14 days @ 77°F (25°C), 50% RH
- Cured specific gravity 1.59
- Nonvolatile content, % 98
- Ultimate cure hardness, Durometer A 55
- Peel strength, pli (N/25 mm), 100% cohesion
  - AMS 2629 JRF immersion, 7 days @ 140°F (60°C)
    - AMS 2471 (Anodized aluminum) 48 (214)
    - AMS 4901 (Titanium)* 50 (222)
    - AMS 5516 (Stainless steel)* 48 (213)
    - MIL-C-5541 (Alodine aluminum) 45 (200)
    - MIL-C-27725 (IFT coating) 45 (200)
  - AMS 2629 JRF/NaCl-H2O immersion, 7 days @ 140°F (60°C)
    - AMS 2471 (Anodized aluminum) 62 (276)
    - AMS 4901 (Titanium)* 58 (258)
    - AMS 5516 (Stainless steel)* 69 (307)
    - MIL-C-5541 (Alodine aluminum) 67 (298)
    - MIL-C-27725 (IFT coating) 58 (258)
- *Primed with PR-148 Adhesion Promoter
- Tensile strength, psi (KPa)
  - Standard cure, 14 days @ 77°F (25°C), 50% RH 530 (3654)
  - 12 days immersion in AMS 2629 JRF @ 140°F (60°C) 425 (2930)
  - 8 hours @ 360°F (182°C) 385 (2654)
  - 72 hours immersion in AMS 2629 JRF @ 140°F (60°C), + 72 hours @ 120°F (49°C), + 7 days @ 250°F (121°C) 570 (3930)
- Elongation, %
  - Standard cure, 14 days @ 77°F (25°C), 50% RH 350
  - 12 days immersion in AMS 2629 JRF @ 140°F (60°C) 290
  - 8 hours @ 360°F (182°C) 70
  - 72 hours immersion in AMS 2629 JRF @ 140°F (60°C), + 72 hours @ 120°F (49°C), + 7 days @ 250°F (121°C) 160
- Thermal rupture resistance - Retains pressure of 10 psi with only negligible deformation, both before and after immersion in AMS 2629 JRF.
- Low temperature flexibility @ -65°F (-54°C) - No cracking, checking or loss of adhesion.
Paintability
MIL-C-23377 - No separation from sealant.
MIL-C-83286 - No separation from sealant.

Corrosion resistance - No corrosion, adhesion loss, softening, or blistering after immersion in 2-layer salt water/AMS 2629 JRF after 12 days @ 140°F (60°C) + 60 hours @ 160°F (71°C) + 6 hours @ 180°F (82°C).

Resistance to hydrocarbons - 7 days @ 140°F (60°C) immersed in AMS 2629 JRF + 24 hrs. @ 120°F (49°C) in air.
  Weight loss, % 3
  Swell, % 10

Flexibility - No cracks after bending 180 degrees over 0.125 inch (3.18 mm) mandrel.

Repairability to itself - Excellent to both fresh cured as well as fuel aged and abraded fillets.

Resistance to other fluids - Excellent resistance to water, alcohols, petroleum-base and synthetic lubricating oils, and petroleum-base hydraulic fluids.

Fungus resistance - Non-nutrient

Shaving and sanding - No rolling or tearing

**Note:** The application and performance property values above are typical for the material, but not intended for use in specifications or for acceptance inspection criteria because of variations in testing methods, conditions and configurations.

**Surface Preparation**

Immediately before applying sealant to primed substrates, the surfaces should be cleaned with solvents. Contaminants such as dirt, grease, and/or processing lubricants must be removed prior to sealant application.

A progressive cleaning procedure should be employed using appropriate solvents and a new lint-free cloth conforming to AMS 3819. (Reclaimed solvents or tissue paper should not be used.) Always pour solvent on the cloth to avoid contaminating the solvent supply. Wash one small area at a time.

It is important that the surface is dried with a second clean cloth prior to the solvent evaporating to prevent the redeposition of contaminants on the substrate.

**Storage Life**

The storage life of PR-1770 Class B is at least 9 months when stored at temperatures below 80°F (27°C) in original, unopened containers.

**Health Precautions**

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Material Safety Data Sheet (MSDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An MSDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

For industrial use only. Keep away from children.

Additional information can be found at: [www.ppgaerospace.com](http://www.ppgaerospace.com)

For sales and ordering information call 1-800-AEROMIX (237-6649).