DATA SHEET

AIRPAD
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A Non-Silicone Tooling Rubber For Making Flexible Mandrels
And Caul Sheets That Distribute Equal Pressure In All Directions

General Information

Airpad is an uncured non-silicone rubber that can be made into pressure caul sheets and flexible mandrels. The Airpad pressure intensifier provides uniform pressure distribution during autoclave processing. This creates toolside part quality on the vacuum bag side of the part. Airpad will take high temperatures similar to silicone rubbers but will not cause silicone contamination. Airpad is not degraded by epoxies, unlike silicones. Airpad is dimensionally stable when reinforced with Toolmaster Prepreg TMGP4100 or TMFP3100. Toolmaster TMGP4100 and TMFP3100 have the same flow and cure temperatures as Airpad making a perfect bond. Toolmaster is a hot melt system that does not give off volatiles from solvents that could also cause delamination.

Airpad must be reinforced with Toolmaster prepreg to stay dimensionally stable.. Never reinforce the male radius if stretch is needed. Airpad is not a release rubber, therefore, it is necessary to bond 2 mil (50m) A4000 bondable one side to the Airpad during fabrication. An alternative release method is to apply Tooltec CS5 to the cured Airpad. We suggest the 2 mil (50m) A4000 bondable one side because the bond lasts longer than the Tooltec CS5. Integrated stiffeners and flexible mandrels can also be fabricated from Airpad. Our flexible mandrels are ideal for closed end tooling. Flexible mandrels can do anything that was previously done by trapped rubber molding.

Main Function of Airpad

1. To provide uniform fluid and mechanical pressure on the laminate to eliminate resin buildup, resin starvation and wrinkles.

2. Composite stiffeners can be made easily using reinforced Airpad flexible mandrels and caul sheets. Airpad tooling makes co-curing easy.

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WE COVER THE WORLD WITH HIGH TEMPERATURE FILM
## AIRPAD

### Material Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Use Temperature</td>
<td>400°F - 204°C</td>
</tr>
<tr>
<td>Durometer Shore A</td>
<td>65</td>
</tr>
<tr>
<td>Elongation %</td>
<td>400</td>
</tr>
<tr>
<td>Tensile psi</td>
<td>1300</td>
</tr>
<tr>
<td>Standard Thickness</td>
<td>1/16 Inch (.0625&quot; (.1587 cm))</td>
</tr>
<tr>
<td>Standard Roll Size</td>
<td>54 Inches (135cm) wide x 50 ft.(15.24m)</td>
</tr>
<tr>
<td>Cycles after First Cure</td>
<td>Over 100 Cycles depending on use</td>
</tr>
<tr>
<td>Storage</td>
<td>Room Temperature - Do Not Freeze</td>
</tr>
<tr>
<td>Shelf Life</td>
<td>18 months if stored at 72°F (22°C)</td>
</tr>
</tbody>
</table>

### Curing AIRPAD

Uncured AIRPAD must be cured at 350°F-176°C for 2 hours in an autoclave. Minimum pressure 45 PSI 3 BARS. Best pressure is 100 PSI 7 BARS.

### Guidelines
1. A high temperature sample part is required to offset part thickness during fabrication of the AIRPAD. For honeycomb parts, a high temperature dummy part must also be used as a mold for the AIRPAD tooling.

2. AIRPAD must be covered with a release material. The best release is our 2 mil (50m) A4000 Bondable One Side applied to the AIRPAD in the B stage. Knife cuts in the bondable A4000 one side can be repaired using our Teflease MG2. Tooltec CS5 can also be applied to cured AIRPAD. The pressure sensitive bond is not as good as the treated A4000 bond.

3. We recommend non-silicone release agents on AIRPAD to extend product life. See Release Agent Section of this catalog.


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