PAMG-PA3 5056 Aluminum Honeycomb

Description:

PAMG-PA3 5056 aerospace grade aluminum honeycomb is a lightweight phosphoric acid anodized core material which offers superior corrosion resistance and node bond strength over traditional organo-metallic coated aluminum honeycomb. PAMG-PA3 5056 honeycomb is made from 5056 aluminum alloy foil and meets all the requirements of AMS C7438 Rev A Class 1.

Applications:

PAMG-PA3 5056 honeycomb uses include aircraft nacelles, aircraft leading and trailing edges, launcher structures, fan casings, fuel cells, fuselage components, and satellite structures. PAMG-PA3 5056 honeycomb is suitable for applications where materials conforming to AMS C7438 Rev A Class 1 are required.

Features:

- Elevated use temperatures
- High thermal conductivity
- Flame resistant
- Excellent moisture and corrosion resistance
- Fungi resistant
- Low weight / High strength
- Improved node bond strength for increased formability

Availability:

PAMG-PA3 5056 honeycomb is available in four forms: unexpanded blocks, unexpanded slices, untrimmed expanded sheets and cut to size expanded sheets. It is also available with or without cell perforations to facilitate cell venting for certain applications. Plascore PAMG-PA3 honeycomb is currently not available for 0.0007” foil.

- Cell Sizes: 1/8” - 3/8”
- Densities: 2.3 pcf - 8.1 pcf
- Sheet “Ribbon” (L): 48” typical - 72” max
- Sheet “Transverse” (W): 96” typical - 200” max
- Sheet Thickness (T): 20”/34” max

Tolerances:

- Length: ± 6”, - 0”
- Width: ± 6”, - 0”
- Thickness: ± .005” (under 4” thick)
  ± .062” (over 4” thick)
- Density: ± 10%
- Cell Size: ± 10%

NOTE: Special dimensions, sizes, tolerances, CNC machining and die cut to size can be provided upon request.

Corrosion Resistance:

The anodized PA3 coating offers excellent protection for honeycomb cores exposed to corrosive environments, meeting the requirements of AMS C7438 Rev A, CL1.
**PAMG-PA3 5056 honeycomb is specified as follows:**

- **Trade Name** - Corrosion Coating
- **Density**
- **Cell Size**
- **Foil Gauge**
- **Perforation** - P
- **Alloy** - 5056

Designates aerospace grade aluminum

Nominal density in pounds per cubic foot

Nominal foil gauge in ten-thousands inch

Example: **PAMG - PA3 - 3.0 - 3/8 - 20 - P - 5056**

PA3 anodized coating

Cell size in inches

Cell walls perforated (P); not perforated (N)

**PAMG-PA3 5056 Mechanical Properties**

<table>
<thead>
<tr>
<th>CELL SIZE inch</th>
<th>NOMINAL FOIL GAUGE inch</th>
<th>NOMINAL DENSITY PCF</th>
<th>STRENGTH PSI</th>
<th>MODULUS KSI</th>
<th>STRENGTH PSI</th>
<th>MODULUS KSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
<td>.001</td>
<td>4.5</td>
<td>630</td>
<td>185</td>
<td>425</td>
<td>70</td>
</tr>
<tr>
<td>1/8</td>
<td>.0015</td>
<td>6.1</td>
<td>1000</td>
<td>295</td>
<td>640</td>
<td>102</td>
</tr>
<tr>
<td>1/8</td>
<td>.002</td>
<td>8.1</td>
<td>1520</td>
<td>435</td>
<td>900</td>
<td>143</td>
</tr>
<tr>
<td>3/16</td>
<td>.001</td>
<td>3.1</td>
<td>340</td>
<td>97</td>
<td>255</td>
<td>45</td>
</tr>
<tr>
<td>3/16</td>
<td>.0015</td>
<td>4.4</td>
<td>600</td>
<td>180</td>
<td>410</td>
<td>68</td>
</tr>
<tr>
<td>3/16</td>
<td>.002</td>
<td>5.7</td>
<td>910</td>
<td>270</td>
<td>585</td>
<td>94</td>
</tr>
<tr>
<td>1/4</td>
<td>.001</td>
<td>2.3</td>
<td>205</td>
<td>58</td>
<td>170</td>
<td>32</td>
</tr>
<tr>
<td>1/4</td>
<td>.0015</td>
<td>3.4</td>
<td>395</td>
<td>115</td>
<td>290</td>
<td>50</td>
</tr>
<tr>
<td>1/4</td>
<td>.002</td>
<td>4.3</td>
<td>580</td>
<td>172</td>
<td>400</td>
<td>67</td>
</tr>
<tr>
<td>1/4</td>
<td>.0025</td>
<td>5.2</td>
<td>790</td>
<td>230</td>
<td>500</td>
<td>84</td>
</tr>
<tr>
<td>3/8</td>
<td>.001</td>
<td>1.6</td>
<td>100</td>
<td>30</td>
<td>90</td>
<td>20</td>
</tr>
<tr>
<td>3/8</td>
<td>.0015</td>
<td>2.3</td>
<td>205</td>
<td>58</td>
<td>170</td>
<td>32</td>
</tr>
<tr>
<td>3/8</td>
<td>.002</td>
<td>3.0</td>
<td>320</td>
<td>92</td>
<td>245</td>
<td>43</td>
</tr>
</tbody>
</table>

*Minimum values may be up to 25% lower than typical values.

Tested at 0.625” per AMS C7438 Rev A at room temperature.