PP Polypropylene Honeycomb

Description:
PP polypropylene honeycomb exhibits a unique cell structure. The core has 3 orientations vs. the 2 orientations common with other honeycomb, making its properties more uniform. Each cell has a tubular form and is inherently stable.

PP polypropylene honeycomb is supplied with or without a non-woven polyester veil for better bonding. It is also supplied with or without a film barrier under the polyester veil to limit the amount of resin consumption.

Applications:
PP polypropylene honeycomb uses include sandwich panel cores, energy absorption and filtration media.

Features:
- High strength to weight ratio
- Corrosion, fungi, rot, chemical and moisture resistant
- Sound and vibration dampening
- Energy absorbing
- Thermoformable
- Temperature use to 180°F
- Recyclable

Availability:
PP polypropylene honeycomb is available in the following standard dimensions.

Densities: 3.5 to 20.0 pcf
Thickness: ¼" to 6" Laminated; up to 24" open cell
Sheet Length: Up to 50'
Sheet Width: 72" max.

Tolerances:
- Length: ± .125"
- Width: ± .125"
- Thickness: ± .02"
- Open Cell: ± .03" w/reinforced PP facings ± .03"
- Density: ± 10%
PP polypropylene honeycomb is specified as follows:

Material - Cell Size - Color - Thickness

<table>
<thead>
<tr>
<th>Core</th>
<th>Cell Size</th>
<th>Material Density (lbs/ft³)</th>
<th>Cell Size in mm</th>
<th>T = Trimmed</th>
<th>U = Untrimmed</th>
<th>Skin Types:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP1-5.0-N1-8</td>
<td>0.315</td>
<td>8</td>
<td>0.315</td>
<td></td>
<td></td>
<td>00 - Open Cell</td>
</tr>
<tr>
<td>PP1-4.0-N1-10</td>
<td>0.395</td>
<td>10</td>
<td>0.395</td>
<td></td>
<td></td>
<td>01 - Standard Non Woven</td>
</tr>
</tbody>
</table>

**PP Honeycomb Core Mechanical Properties**

<table>
<thead>
<tr>
<th>Core</th>
<th>Cell Size</th>
<th>Density</th>
<th>Flatwise Tensile¹</th>
<th>Bare Compression¹</th>
<th>Plate Shear³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(in) (mm)</td>
<td>lb/ft³</td>
<td>psi</td>
<td>psi</td>
<td>psi</td>
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<tr>
<td></td>
<td></td>
<td>kg/m³</td>
<td>psi</td>
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<td>MPa</td>
<td>MPa</td>
<td>MPa</td>
</tr>
<tr>
<td>PP1-5.0-N1-8</td>
<td>0.315</td>
<td>8</td>
<td>130</td>
<td>11.5</td>
<td>85</td>
</tr>
<tr>
<td>PP1-4.0-N1-10</td>
<td>0.395</td>
<td>10</td>
<td>120</td>
<td>10.5</td>
<td>60</td>
</tr>
</tbody>
</table>

¹Flatwise Tensile Thru Core Tested per ASTM C-297
²Bare Compression Thru Core Tested per ASTM C-365
³Plate Shear Thru Core Tested per ASTM C-275

The data provided is based on the testing of -01 (veil only) version of each core type.

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