Product Description

ISOLOSS™ AG (Automotive Grade) is a cushioning polyurethane foam designed specifically for the automotive market. It provides a consistent compression force deflection (CFD), combined with very low compression set, making it a perfect solution for use in electric vehicle battery packs to control the swelling of lithium-ion cells, along with many other general automotive applications.

### ISOLOSS™ AG Foams

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>AG-160xx</th>
<th>AG-240xx</th>
<th>AG-320xx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density Nominal kg/m³ (lb/ft³) ASTM D3574</td>
<td>160 (10)</td>
<td>240 (15)</td>
<td>320 (20)</td>
</tr>
<tr>
<td>Flammability UL 94 mm (in) Listed HBF @ 6 mm+ Listed HBF @ 3.0-9.5 (.12-.37) Listed HBF 1.5-3.6 (0.06-.14)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FMVSS-302 mm (in) Passes @ 1.5 (.06) Passes @ 1.5 (.06) Passes @ 1.5 (.06)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume Resistivity ASTM D257, ohms</td>
<td>$10^{11}$</td>
<td>$10^{11}$</td>
<td>$10^{11}$</td>
</tr>
<tr>
<td>Hardness ASTM D2240 Durometer 15 sec post impact, Type O 15 sec post impact, Type OO</td>
<td>3</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>27</td>
<td>50</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Brittleness Temperature °C (F) ASTM D746</td>
<td>-59°C (-74°F)</td>
<td>-48°C (-54°F)</td>
<td>-49°C (-56°F)</td>
</tr>
<tr>
<td>Sealing Qualified for mfrd or natural gas; diesel fuel or lubricating oil; liquidified petroleum gas; under UL 157 test standards UL 50 UL 508 UL 514B Meets Listed Listed Listed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compression Set (%) (50% compression) ASTM D1667 22 hours at 23°C (73°F) ASTM D3574 22 hours at 70°C (158°F) ASTM D3574 after 5 hours autoclave at 121°C (250°F)</td>
<td>0.9</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>2.1</td>
<td>2.4</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>1.8</td>
<td>1.5</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Compression Load Deflection kPa (psi) ASTM D3574, Deflection: 25% kPa (psi) 50% kPa (psi)</td>
<td>15 (2.2)</td>
<td>39 (5.7)</td>
<td>50 (7)</td>
</tr>
<tr>
<td>Tensile Strength kPa (psi) ASTM D3574</td>
<td>240 (40)</td>
<td>530 (77)</td>
<td>800 (120)</td>
</tr>
<tr>
<td>Tear Strength kN/m (lbf/in) ASTM D624</td>
<td>1.0 (5)</td>
<td>1.5 (9.1)</td>
<td>2.1 (12.0)</td>
</tr>
<tr>
<td>Temperature Range °C (F) Normal Operating Recommended Max. Intermittent -40°C to 107°C (-40°F to 225°F) 120°C (248°F)</td>
<td>-40°C to 107°C (-40°F to 225°F) 120°C (248°F)</td>
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<td>-40°C to 107°C (-40°F to 225°F) 120°C (248°F)</td>
</tr>
<tr>
<td>Outgassing ASTM E595 24 hours @ 10⁻¹ Torr &amp; 70°C (158°F), Weight Loss, % Volatile Condensable Material, %</td>
<td>1.4</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>Corrosion Resistance AMS D3568 Excellent Excellent Excellent</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cold Flexibility AMS 3568 4hr at -18°C (0°F) Passes Passes Passes</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Dielectric Strength ASTM D149</td>
<td>105 V/mil</td>
<td>90 V/mil</td>
<td>90 V/mil</td>
</tr>
<tr>
<td>RoHS 3 Compliant</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tbody>
</table>
**Technical Information**

The data listed in this data sheet are typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials must be tested under actual service to determine their suitability for a particular purpose.

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ISOLOSS™ AG Battery Cushioning Foams

**COMPRESSION FORCE DEFLECTION**

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<th>Compressive Stress (kPa)</th>
<th>Compressive Strain (%)</th>
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<td>AG-200xx</td>
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<td>AG-320xx</td>
<td></td>
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<tr>
<td>AG-400xx</td>
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</tbody>
</table>

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