Description:
- Needlepunch 100% Polyester Fiber Composite
- High Temperature Polyester Binder System
- Integrated Black Surface with High Strength & Toughness

Applications:
- Light Duty – Passenger car wheel house liner
- Medium Duty – SUV or applications requiring higher part stiffness
- Heavy Duty – Truck applications requiring greatest part toughness and durability

Features and Advantages:
- High Acoustic Performance and Functionality to Reduce Tire/Road Noise - See Attached Random Absorption Graph
- Low Impact Noise Generation to Reduce Noise from Water Splash and Gravel - See Attached APAMAT Noise Graph
- Product must survive physical and environmental exposures in wheel well application – see table below
- Reduced Weight
- Reduced Noise Levels for Exterior and Interior Noise
- Improved Comfort from Stone Impact and Water Splash
- Reduced Number of Components

<table>
<thead>
<tr>
<th>Standard</th>
<th>Standard Name</th>
<th>UOM</th>
<th>Light Duty (900gsm)</th>
<th>Medium Duty (1200gsm)</th>
<th>Heavy Duty (1400gsm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM D5034 / ISO 9073-18</td>
<td>Tensile Strength</td>
<td>N/cm</td>
<td>MD 94</td>
<td>CD 143</td>
<td>MD 286</td>
</tr>
<tr>
<td>ASTM D5733 / ISO 9073-4</td>
<td>Tear Strength</td>
<td>Newtons</td>
<td>MD 170</td>
<td>CD 78</td>
<td>MD 226</td>
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<tr>
<td>ASTM D790 / ISO 178</td>
<td>Bending Stifness</td>
<td>Newtons @ 10mm deflection</td>
<td>7.5</td>
<td>15.8</td>
<td>26.2</td>
</tr>
<tr>
<td>SAE J913 / ISO 9073-6</td>
<td>Water Wicking</td>
<td>mm</td>
<td>&lt;5</td>
<td>&lt;5</td>
<td>&lt;5</td>
</tr>
<tr>
<td>SAE J369 / ISO3795</td>
<td>Flammability</td>
<td>mm/min.</td>
<td>SE</td>
<td>SE</td>
<td>SE</td>
</tr>
<tr>
<td>SAE J400 / ISO 20567-1</td>
<td>Gravelometer</td>
<td></td>
<td></td>
<td>No Holes, Damage, Hairiness, or Material Degradation</td>
<td></td>
</tr>
<tr>
<td>ASTM D3884 / ISO5470-1</td>
<td>Taber Abrasion</td>
<td></td>
<td>1000 cycles minimum</td>
<td>- no surface peeling</td>
<td>- no loose fiber</td>
</tr>
</tbody>
</table>

This is a picture of Lydall’s wheel liner after 100% completion of vehicle level durability testing of a heavy-duty truck.

This is a picture of a production wheel well part placed in the check-fixture prior to packaging for shipment.

Lydall Thermal / Acoustical, Inc.  www.lydallautomotive.com  info@lydall.com

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Thermal and acoustical systems
Wheel Wells - Molded Fiber Composite

Lydall APAMAT II Sound Level Results
(Panels Tested without Steel Base Plate - Ball Bearings Impacting Panels Directly)
Test Conducted at Roush Industries

Radiated Sound Pressure Level vs. Frequency (Hz)
- Solid Filled Polypropylene Sheet - 2.3mm @ 7.0 osf
- Lydall Molded Wheel Well Fiber Composite - 5mm @ 4.8 osf
- 20 ga Cold Roll Steel (for reference)

Lydall APAMAT II Sound Level Results
(Panels Tested without Steel Base Plate - Ball Bearings Impacting Panels Directly)
Test Conducted at Roush Industries

Acoustic Wheel House Splash Shields
Random Incidence Sound Absorption Coefficient (ASTM C423) - 10 mm Air Gap
Measured by Kolano & Saha

Absorption Coefficient vs. Frequency (Hz)
- 53: 1200 gsm, 3.6 mm thick material (10 mm air gap)
- Meas. Data: Thickness: 3.8 mm, Surf. Density: 1.25 kg/m², SAA ~ 0.25, NRC ~ 0.25

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