Polyurethanes

ACOUSTIFLEX® S NBR

Semi-rigid polyurethane foam system for automotive applications

KEY FEATURES

• A lightweight, thermoformable semi-rigid foam with improved sound absorption
• Enables cost-efficient production with consistent batch-to-batch quality
• Delivers flammability characteristics - MVSS 302 and UL-94V0
• Phenolic free
• Self-supporting – a reduced number of clips are required for faster assembly
• Consistent acoustics and density through the block

BENEFITS

• Lower density foam components can be produced for lighter weight components and faster processing
• Excellent sound absorption for quieter vehicles
• Ease of thermoforming allows thicker, more complex shapes and customizable designs of component parts
• Fast cool down and cycle time for more cost-efficient production without compromising product performance
• Suited for self-extinguishing and non-burning end products according to MVSS 302 and UL-94V0
• Up to a 20% raw material saving compared to the 15 kg/m³ variants

TYPICAL APPLICATIONS

Ideal for use in a range of semi-structural components such as:

• Engine and trunk compartments
• Tunnel insulation
• Engine hood liner

• Outer tunnel absorber
• Outer dash panel absorber
TYPICAL FOAM PROPERTIES

<table>
<thead>
<tr>
<th>Property and Test Method</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core density</td>
<td>13 ± 1</td>
<td>kg/m³</td>
</tr>
<tr>
<td>CLD one cycle - Stress @ 40%</td>
<td>23 ± 2</td>
<td>kPa</td>
</tr>
<tr>
<td>Tensile strength ISO 1798 (flexible) - Stress @ max load</td>
<td>25 ± 3</td>
<td>kPa</td>
</tr>
<tr>
<td>Tensile strength ISO 1926 (rigid) - Stress @ max load</td>
<td>40 ± 4</td>
<td>kPa</td>
</tr>
<tr>
<td>Elongation – ISO 1926</td>
<td>18 ± 3</td>
<td>%</td>
</tr>
<tr>
<td>Three point bending ISO 1209 - Stress @ max load</td>
<td>35 ± 5</td>
<td>kPa</td>
</tr>
<tr>
<td>Thermoforming</td>
<td>OK</td>
<td>-</td>
</tr>
<tr>
<td>FOG – DIN 75201</td>
<td>&lt; 0.5</td>
<td>mg</td>
</tr>
<tr>
<td>Flammability - MVSS 302</td>
<td>NBR*</td>
<td>mm/min</td>
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</tbody>
</table>

Note: The above properties were obtained from a block foam made on a “Golden Bucket” type machine.

* Non-Burning Rate

APPLICATION METHOD

This MDI-based system is produced on a “Golden Bucket” type machine with standard processing parameters* to produce discontinuous batchblock foam blocks. These blocks can be sliced and thermoformed onto a textile substrate.

* Details can be obtained from our technical service

STRIVING FOR SUSTAINABILITY

Our new ACOUSTIFLEX® S NBR polyurethane foam system continues to support the United Nations Sustainable Development Goals with three of particular relevance to our work in transportation sectors:

- Acoustic comfort
- Low Volatile Organic Compound (VOC) emissions
- Low odor

- Fast cool down and cycle time
- Quality consistency
- Lower production waste level
- Low density to support lightweight design
- Ease of thermoforming

CONTACT US

A global provider of innovative solutions and one of the leaders in MDI based polyurethanes, Huntsman is proud of their long and successful track record of delivering PU resins for automotive applications including acoustics, seating and composite materials. Huntsman is dedicated to providing our customers with the finest quality of products and services available. Our technical experts are ready to work in partnership with you on your next project and help solve complex design issues with differentiated, bespoke, cost effective solutions.

We invite you to contact us for further information or immediate assistance at polyurethanes_eu@huntsman.com