

Polyurethanes

ACOUSTIFLEX® S NBR

Semi-rigid polyurethane foam system for automotive applications

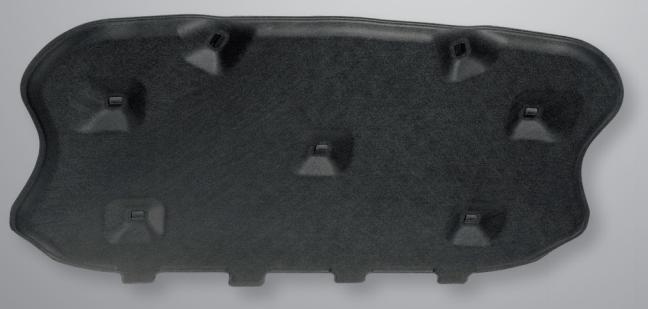


Image courtesy of Borgers SE & Co. KGaA

PRODUCT DESCRIPTION

New ACOUSTIFLEX® S NBR* polyurethane foam system is a Lightweight Absorber (LWA) semi-rigid foam designed for acoustic applications in engine and trunk compartments. This technology is fully formulated and includes the mix of a polyol blend with SUPRASEC® diisocyanate and additives to produce acoustic components for the automotive industry. This new formulation is thermoformable, boasting superior acoustics absorption and offering greater flexibility to satisfy a range of design needs.

* Self-supporting Non-Burning Rate

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

Property and Test Method	Value	Unit
Core density	13 ± 1	kg/m ³
CLD one cycle - Stress @ 40%	23 ± 2	kPa
Tensile strength ISO 1798 (flexible) - Stress @ max load	26 ± 3	kPa
Tensile strength ISO 1926 (rigid) - Stress @ max load	40 ± 4	kPa
Elongation – ISO 1926	18 ± 3	%
Three point bending ISO 1209 - Stress @ max load	35 ± 5	kPa
Thermoforming	OK	-
FOG - DIN 75201	< 0.5	mg
Flammability - MVSS 302	NBR*	mm/min

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

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