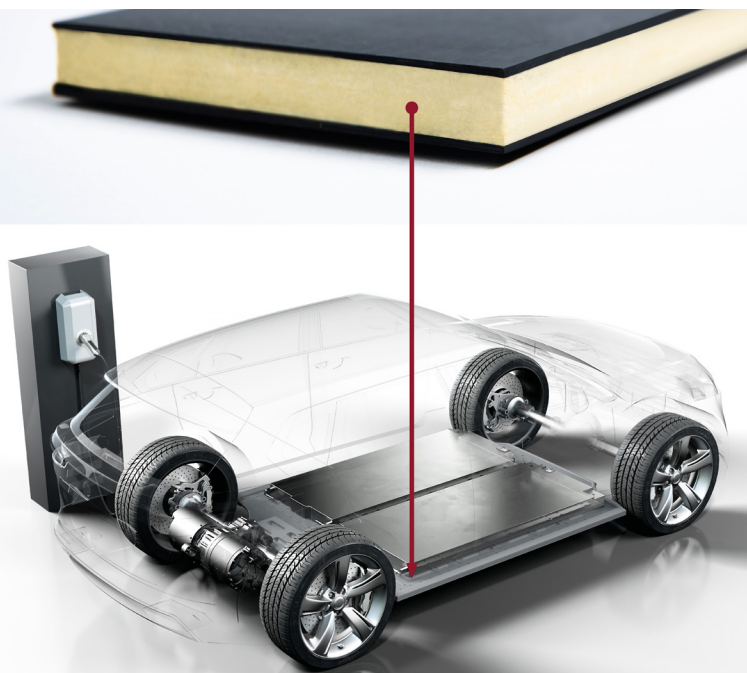


Polyurethanes

RIMLINE® FC polyurethane system

Developed for battery enclosures and other automotive components



PRODUCT DESCRIPTION

RIMLINE® FC polyurethane system is a two-component foam core technology which can enable a cost-effective solution for sandwich composite structures. Employed alongside glass or carbon reinforcements to build a preform, RIMLINE® FC polyurethane system can help create lightweight, durable battery enclosure components for electric vehicles. It can also be used to create other automotive components including under floor panels, door frames, and inserts for semi-structural and acoustically enhanced parts.

Moldable and tunable, with an outstanding mix of properties that can be tailored to meet different manufacturing processes and complex design requirements, RIMLINE® FC system is a versatile technology that can deliver low resin penetration and excellent adhesion alongside reliable process performance.

FEATURES

- Excellent flow behaviour
- Good moldability and low resin penetration at in-mold pressures up to 35 bars
- Short cure times in density range between 150-300kg/m³
- Low residual deposits on equipment
- Core surface ready for overmolding with resins with very good adhesion
- Compatible with VITROX® and RIMLINE® composite resins
- Developed for WCM (Wet Compression Molding) and RTM (Resin Transfer Molding) processing conditions

BENEFITS

- Versatile and durable, can enable engineering design freedom
- Can enable a cost-effective formulation for affordable sandwich composites
- Can be molded into complex 3D shapes
- Tunable to help meet customer manufacturing needs
- Can reduce weight and provide additional impact protection of EV battery packs

APPLICATIONS

- Battery covers and enclosure panels
- Under floor structures
- Door frames
- Inserts for structural parts
- Inserts for semi-structural parts
- Acoustically enhanced components

TYPICAL SYSTEM PROPERTIES

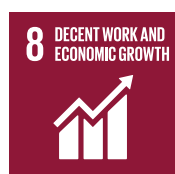
The RIMLINE® FC system has been developed for use in the production of composite core foam parts with high-pressure mixing machines. The foam properties have been measured on flat samples produced manually in a casting mold.

Typical Properties	Unit	Values
Overall moulded density	kg/m ³	150-300
Tg (DMTA)	°C	150
Flexural stress @ max load	MPa	4.0-7.0
Flexural modulus	MPa	100-220
Compression stress @ 10% strain	MPa	2.5-7.0
Compression modulus	MPa	60-80

Results generated in lab or field conditions which are typical for this application. Data variations due to varying processing or ambient conditions can not be excluded. These properties are not part of the specifications of RIMLINE® FC polyurethane system.

DRIVING FOR SUSTAINABILITY

Our RIMLINE® FC polyurethane system supports several United Nations Sustainable Development Goals (SDGs).



- Design flexibility
- Fast production cycles
- Easy release



- Lightweight
- Durable
- Excellent adhesion without surface treatment



- Lightweight for lower fuel consumption

CONTACT US

For more information about the other MDI-based solutions within our full suite of automotive products, please go to huntsman.com and complete the Polyurethanes Contact Us form.

Use the QR code to find the form.



Scan to contact

HUNTSMAN AUTOMOTIVE SOLUTIONS

Huntsman is a global leader in MDI-based polyurethanes, serving automotive customers along the value chain. Huntsman delivers innovative, value-added solutions to the world's best-known car brands. Specialisms include lightweight, enhanced comfort and working towards sustainability ambitions in seating, interior trim, acoustic insulation, and composite panel applications.

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