

Global Capabilities

More than PU Systems

Our global network includes strategically located system houses and key manufacturing hubs worldwide with dedicated local associates. In addition, we have well-equipped competence centers in Europe, Asia and the United States of America with state-of-the-art prototyping and physical testing capabilities.

Dedicated research and development centers across three continents:

- Everberg, Belgium
- Shanghai, China
- Auburn Hills, USA.

Global Reach. Local Knowledge.

At Huntsman, we build partnerships with our customers based on knowledge, trust and experience. This commitment means that comprehensive levels of technical support are always assured.

Across our research and development centers, customers have access to:

- Extensive characterization equipment for mechanical testing of resins, composites and thermomechanical properties
- Dedicated Honeycomb, HP-RTM and Pultrusion set-ups to develop customer specific formulations and parts
- On-site testing and staff training.



HUNTSMAN

Enriching lives through innovation

For further information please contact the composites team for your region

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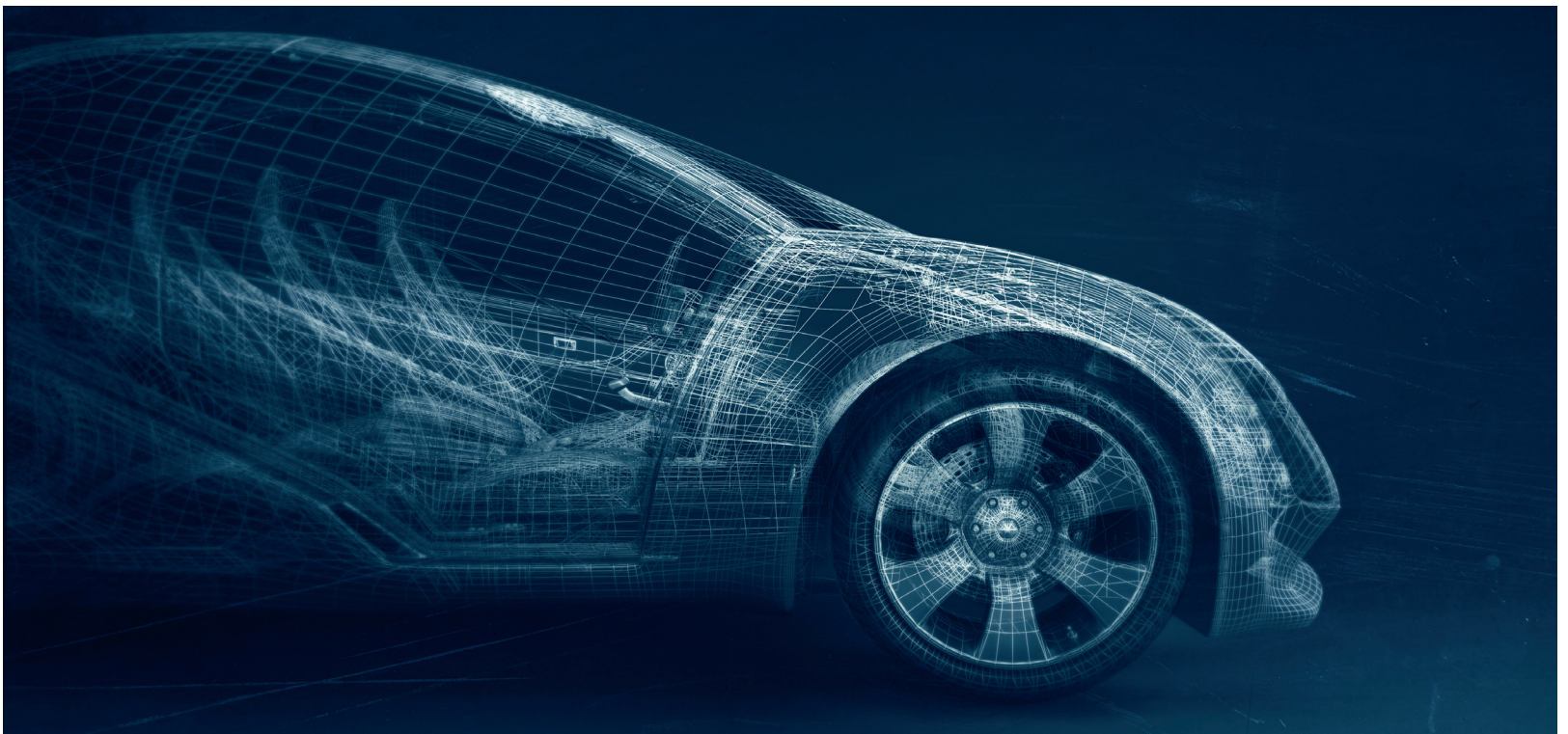
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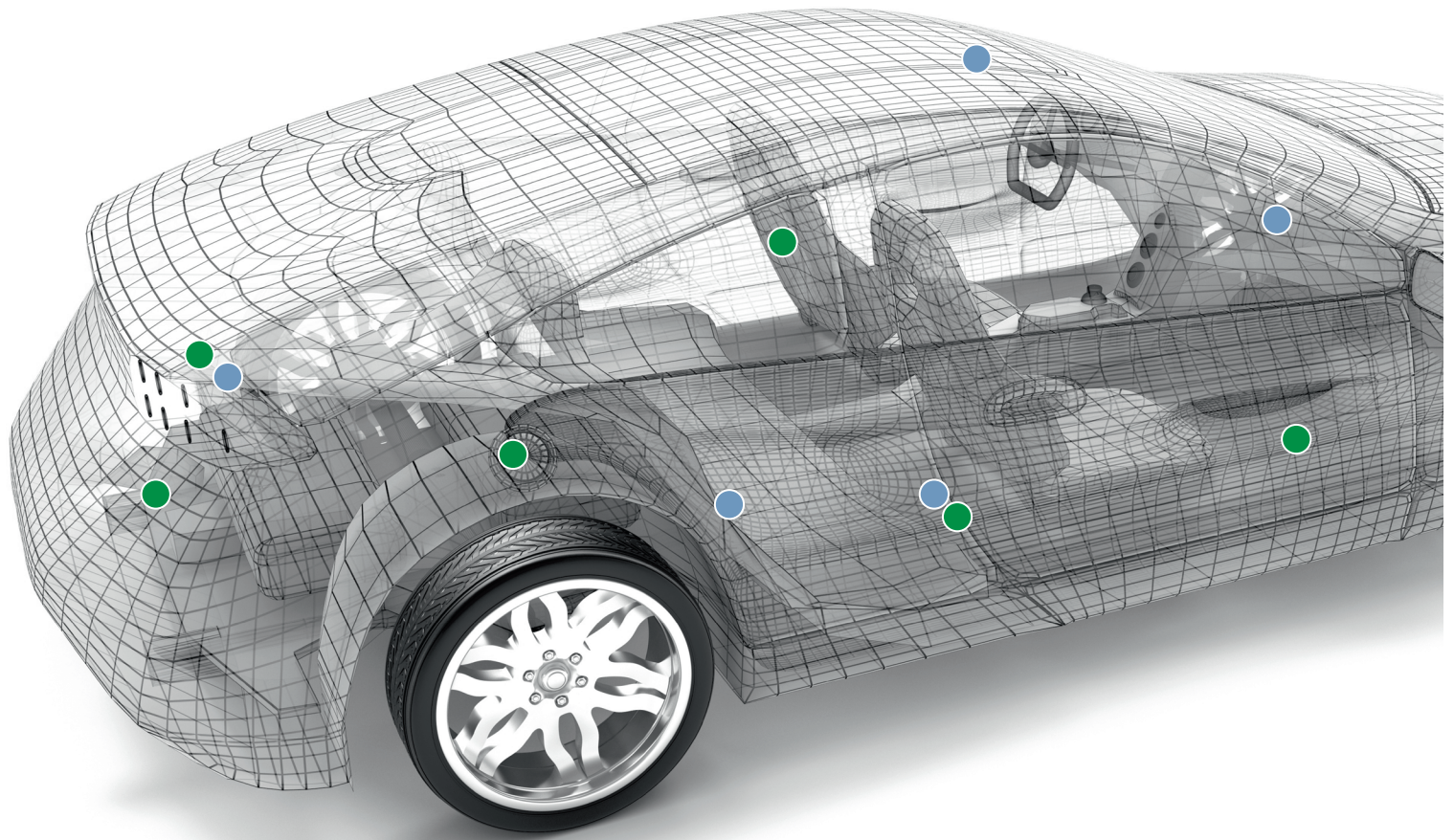
Polyurethanes

light, durable, fast, strong

Polyurethane Composite Systems for the Automotive Industry



RIMLINE[®]
VITROX[®]



RIMLINE®

● RIMLINE® Resin technology

A production proven solution formulated as a standard cross-linked PU, enabling high toughness and durability combined with a high reactivity and fast cure.

Key features:

- Low viscosity
- Durability
- Fast cure
- Short pot life.

VITROX®

● VITROX® Resin technology

A novel cross-linked isocyanate resin solution with tunable Tg 110-140°C and flexible, adjustable open time to provide unprecedented levels of control over the part processing while maintaining high levels of toughness enabled by PU chemistry.

Key features:

- Adjustable open time
- Low viscosity
- Snap cure temperature activation
- High impact strength.

Partner for Composite Innovation

With over 60 years experience developing composite resin technologies, Huntsman scientists collaborate with automotive experts to design products that enable lighter, more fuel-efficient vehicles while maintaining the high quality standards in passenger safety and comfort.



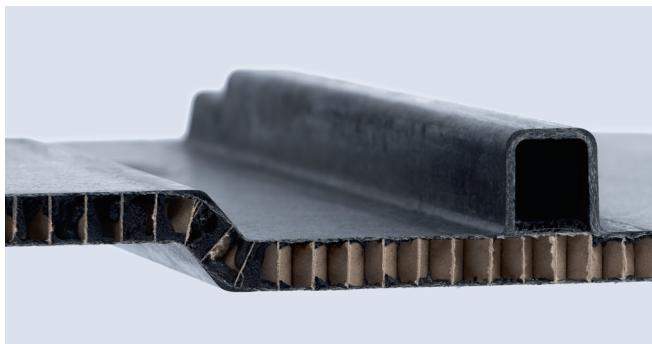
Lightweight and Durability with Spray Honeycomb

Honeycomb technology is advancing towards more complex, structural part design for automotive interiors. Its low cost and rapid processing window achieves cycle times between 1-2 minutes with selectable carbon fiber, thermoplastic, glass fiber or paper core.

Today, designers and engineers can realize the full potential of lightweight solutions by benefitting from the following PU resin features:

● RIMLINE® HC+ Resin technology

- Long spray time and good edge filling capability
- Fast cure, low material waste and high number of releases without tool cleaning
- Excellent property balance for reliable performance of final parts.



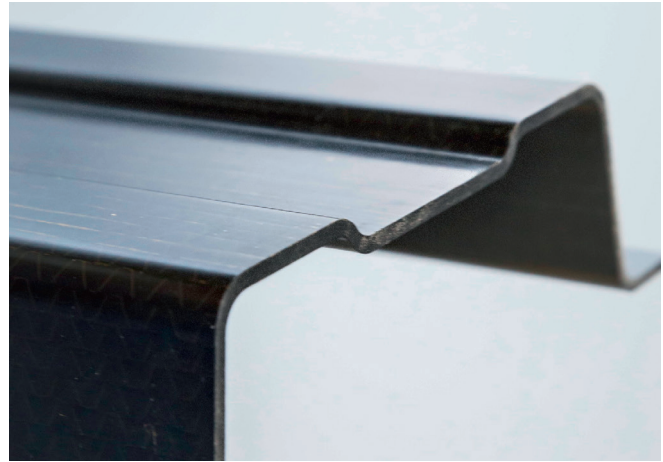
● VITROX® HC Resin technology

- Tunable processing for deep drawn parts and thermoforming of internal thermoplastic core
- Low spray viscosity for deeper impregnation of carbon fiber
- Good balance of temperature resistance and toughness.



Advanced Design and Processability with RTM/ HP-RTM

Resin Transfer Molding (RTM) and the fast adoption of High Pressure RTM (HP-RTM) are empowering the automotive industry with the design and manufacturing of integrated, lightweight structures with cycle times of less than 10 minutes. Polyurethane resin systems have a proven track record in RTM processing for durability and cost-effectiveness. For HP-RTM, Huntsman Polyurethanes developed a unique fully formulated system that offers a low initial mixed resin viscosity with good wetting characteristics and no VOC emissions. New systems are available with or without internal mold release (IMR) and have a tunable catalyst level tailored to customer processing needs.



● RIMLINE® RTM Resin technology

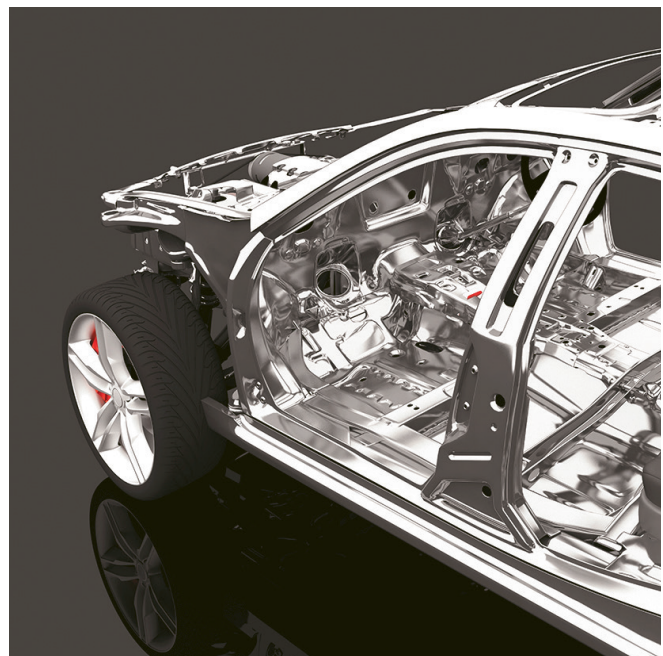
- Very high toughness at given Tg for manufacturing of durable parts
- Good resin and composite properties - Potential for high performance structural parts
- High reactivity and fast cure enabling very excellent productivity when limited working time permitted.

● VITROX® RTM Resin technology

- High Tg up to 160°C for stable mechanical properties
- Good resin and composite properties - Potential for high performance structural parts
- Short cycle times with sufficient demould stiffness to maximize productivity
- Limited pressure build-up enabling the use of lower tonnage presses
- Low viscosity and snap cure for optimized processing.

Cost-Efficient Mass Production with Pultrusion

Pultrusion's cost-efficient manufacturing method enables lightweight replacement solutions for existing vehicle and industrial metal parts. With excellent part-to-part repeatability and PU injectable resin systems, Pultrusion delivers low VOC resin parts characterized by their high productivity performance, and ability to produce parts with complex shapes and dimensions.



● RIMLINE® SK Resin technology

- PU excellent properties balance for reliable performance of final parts
- Durability of PU enables lighter design of components
- Long pot life and variety of viscosities for efficient manufacturing
- Part-to-part repeatability
- High toughness for impact resistant applications.