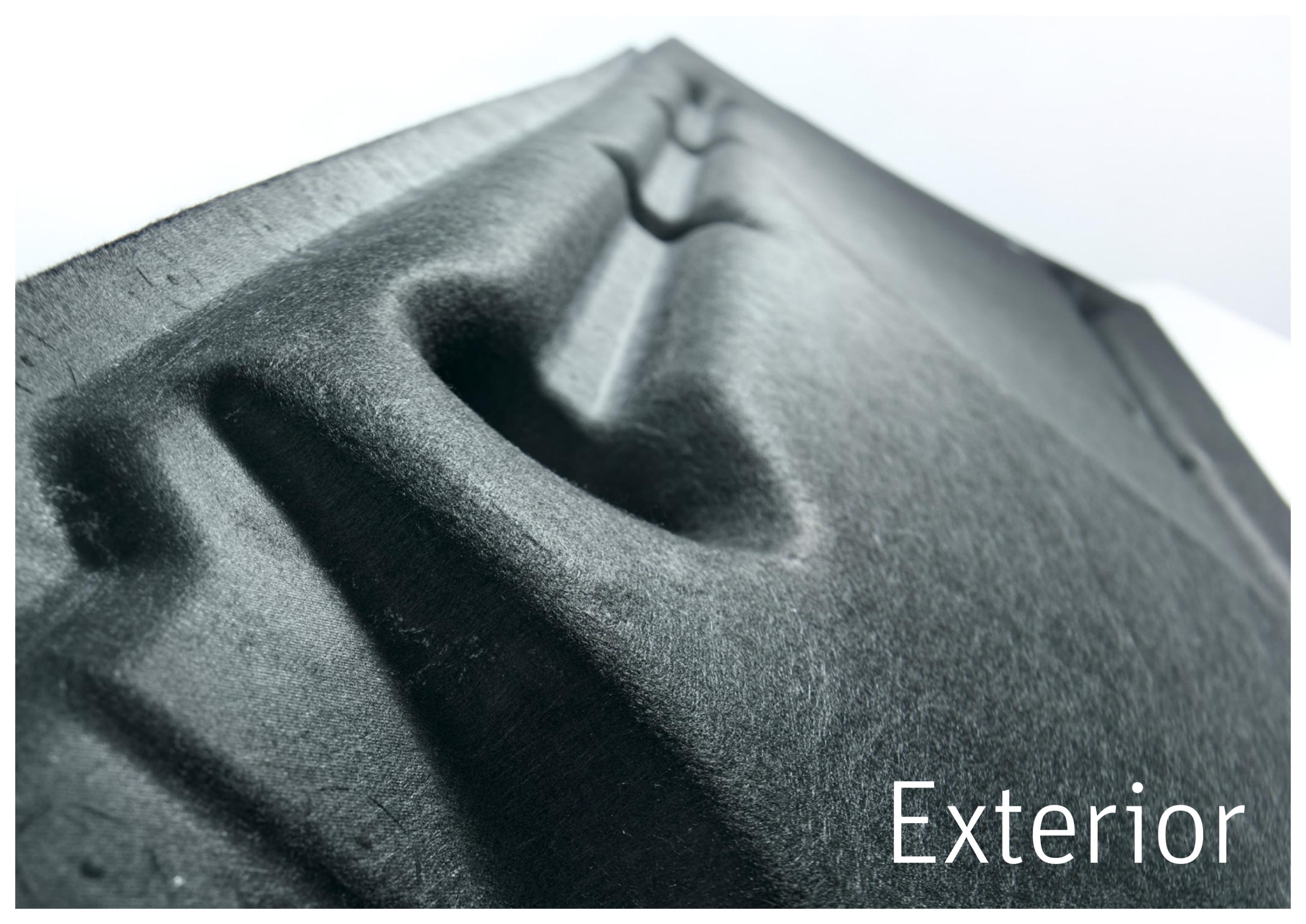




## Product portfolio

Interior · Exterior  
New Mobility · Autoneum Pure.  
Measurement Systems · Simulation Tools



A close-up photograph of a dark, textured fabric, possibly a jacket or sweater. The fabric has a fine, ribbed or woven texture. In the upper center, there is a small, light-colored, embossed or printed logo that resembles a stylized bird or a crest. The lighting is dramatic, with strong highlights and deep shadows, emphasizing the texture of the material. The background is a plain, light color.

Exterior

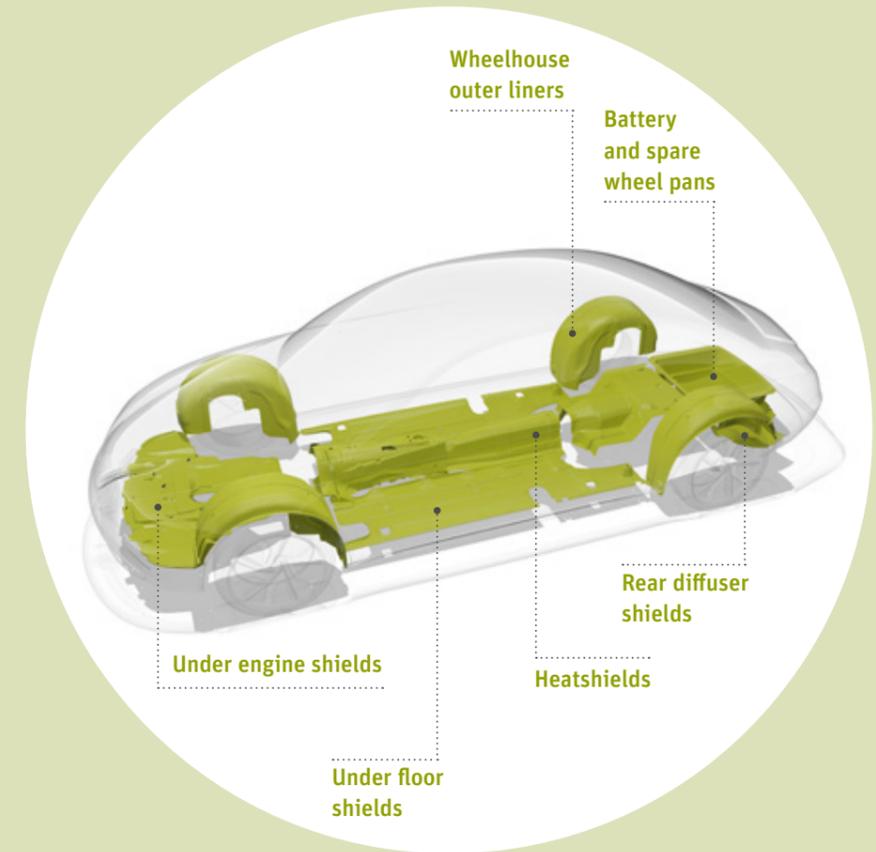
# Underbody

Textile-based and correspondingly lightweight underbody systems of Autoneum absorb noise and therefore simultaneously reduce the interior and exterior noise of cars. They also enhance the aerodynamics of a vehicle. This leads to lower fuel consumption and reduced vehicle emissions.



For further information, please contact:  
**Autoneum | Global Product Management Underbody**  
[underbody@autoneum.com](mailto:underbody@autoneum.com)

## OVERVIEW



These products include a variety of features and benefits



Autoneum supplies exterior components to these customers



# Ultra-Silent

The lightest textile underbody system



With underbody systems made of Ultra-Silent, Autoneum offers the most lightweight textile under floor systems for vehicles: They are up to 50% lighter compared with equivalent plastic components. Underbody systems made of Ultra-Silent also convince with a high degree of impact resistance and optimum stone chip protection. The PET-based, glass-free mono-material is resistant against water and heat and fully recyclable.

At the same time, Ultra-Silent absorbs sound and in doing so reduces the vehicle noise by up to 2 decibels. In addition, under floor systems made of Ultra-Silent enhance the aerodynamics of vehicles by reducing their air resistance. This contributes to lower fuel consumption and thereby reduces CO<sub>2</sub> emissions. The sophisticated engineering behind Ultra-Silent helps reduce mass, the number of fixation points, part numbers, overall complexity and costs. This makes Ultra-Silent a convincing value offer for car makers.

In electric cars, undercovers made of Ultra-Silent are installed underneath the battery casing, providing the battery cells with the best possible protection against extreme ambient conditions.

## BENEFITS

Lightest textile underbody technology

Absorbs sound, thereby reducing vehicle noise

Optimum stone chip protection

**100% PET**  
and completely recyclable

# Mono-Liner

Meets highest sustainability standards



Mono-Liner is Autoneum's latest technology for wheelhouse outer liners. Mono-Liner-based components convince thanks to their lightweight construction, thereby contributing to lower vehicle weight with correspondingly less fuel consumption and CO<sub>2</sub> emissions. They also ensure a greater driving range for electric vehicles.

Mono-Liner-based wheelhouse outer liners are made completely out of PET, of which up to 70% are recycled fibers. All in all, more than 70 PET bottles are reused in one set of these sustainable components. The excellent life cycle assessment is also based on their particularly resource-saving manufacturing: Production cut-offs of Mono-Liner can be processed into pellets and completely returned to the manufacturing process as fibers.

## BENEFITS

50% lighter than equivalent parts made of plastic

Reduces interior and exterior noise

Excellent flammability resistance

Consists of up to **70%** recycled PET fibers

# Alpha-Liner

Optimum tire noise reduction



## BENEFITS

Enhanced acoustic absorption

Anti-icing

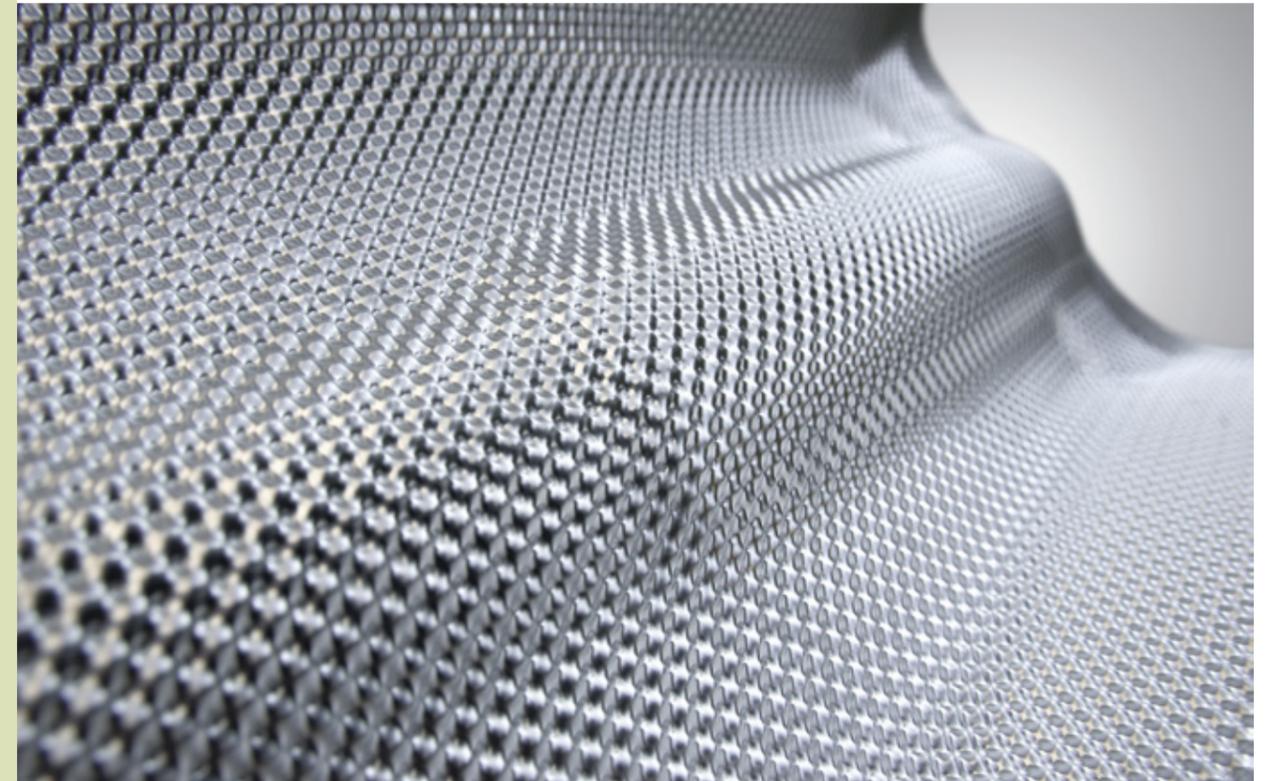
Stone impact protection

**100%**  
acoustically tunable

Alpha-Liner is a lightweight textile wheelhouse outer liner featuring a thin coated surface on the tire side. Thanks to this innovative technology, the porosity of the textile material is tuned to maximize the sound absorption, which contributes to the reduction of tire noise and accordingly improves the pass-by noise level as well as passenger comfort. This advantage is key for car manufacturers, especially in light of increasingly stringent exterior noise regulations worldwide. Sound-reducing components are also essential for electric vehicles because tires have to be insulated even more: Due to the lack of the engine noise, other noises are more audible for passengers. The coating can be adapted to the specific requirements of every vehicle, thereby protecting the textile carrier in areas strongly impacted by water and stone chipping for instance. The plasticized surface is also easier to clean than standard textile wheelhouse outer liners with less ice accumulation on the component. The manufacturing process of Alpha-Liner is solvent-free and eco-friendly. Applied only where it is most effective, the coating allows for the production trim waste to be recycled.

# RIMIC

Heat protection and noise absorption



## BENEFITS

Maximized tunable acoustic performance

High durability thanks to optimized design of perforation area

**High**  
heat protection

Heatshields are used in vehicles primarily to provide protection against the heat that arises in the engine bay and the exhaust system. In order to shelter this radiant warmth, these shields resist heat up to 500°C. Acoustic heatshields based on Autoneum's RIMIC technology additionally reduce the noise emission of the vehicle thanks to their integrated acoustic function. The noise reduction is achieved by means of a special perforation developed by Autoneum. It converts the airborne sound into thermal energy and absorbs it. Using in-house production processes, these perforations are applied specifically only in predefined areas to ensure optimal heat protection and durability. The acoustic performance of heatshields is controlled by the number and density of openings per shield. RIMIC can be used as a single layer, with glass fiber mats or in combination with the Theta-Cell acoustic absorption technology in order to facilitate the absorption of high-frequency sounds of between 2–6 kHz.

Autoneum. Mastering sound and heat.

