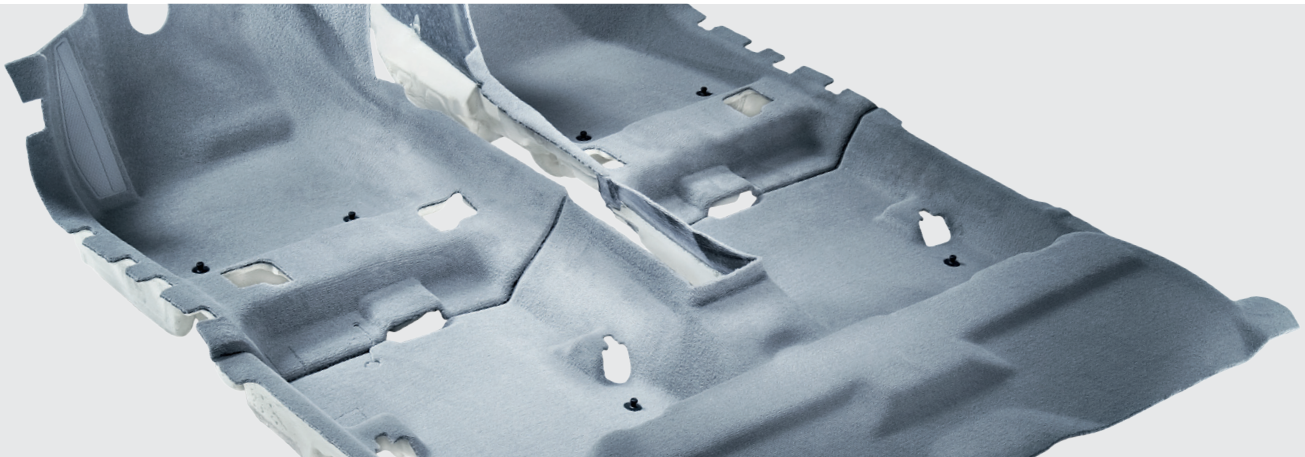
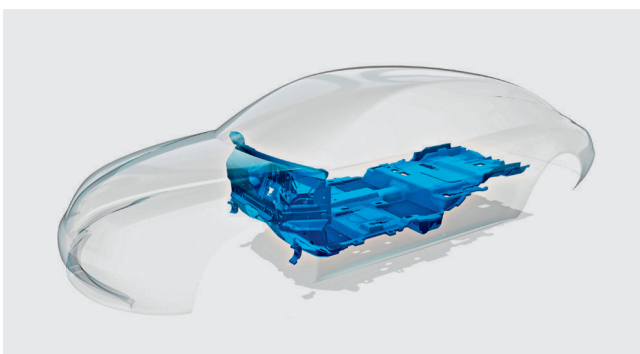


## Lightweight and Multifunctional Solutions Carpet Systems and Inner Dashes



Autoneum is the global market and technology leader in acoustic and thermal management solutions for vehicles and is partner to vehicle manufacturers around the world. The Company provides multifunctional and lightweight technologies and components for optimal protection against noise and heat.

Autoneum's innovations make vehicles quieter, lighter and safer and help to reduce fuel consumption and emissions. Based on long-standing expertise and unique technological know-how, Autoneum develops and produces systems and components for the vehicle engine bay, underbody and interior floor as well as for the body-in-white.



### Available worldwide, designed individually.

Autoneum's customers are the leading light vehicle manufacturers in the automotive markets of Europe, Africa, North America, South America and Asia. Global presence and proximity to the customer is a key success factor and crucial competitive advantage. As a result, the Company carries out both R&T and manufacturing around the world. Sophisticated measurement systems and simulation software enable customized solutions.

### Autoneum offers among others the following products for application in the interior floor:

- Inner dashes
- Non-woven carpets
- Tufted carpets
- Floor insulators
- Floor mats
- Spacers and crash pads

### These products include a number of features and advantages:

- Acoustic absorption and insulation
- Light weight
- Fit to body and grommets
- Aesthetics and optimized haptics
- Cleanability
- Abrasion and puncture resistance
- Bending and compression stiffness
- Energy absorption (in case of a crash)

### Customers of Autoneum's interior floor components:

BMW, FCA, Ford, GM, Honda, Hyundai-Kia, Jaguar Land Rover, Mercedes, PSA, Renault-Nissan, Toyota and Volvo

Autoneum. Mastering sound and heat.

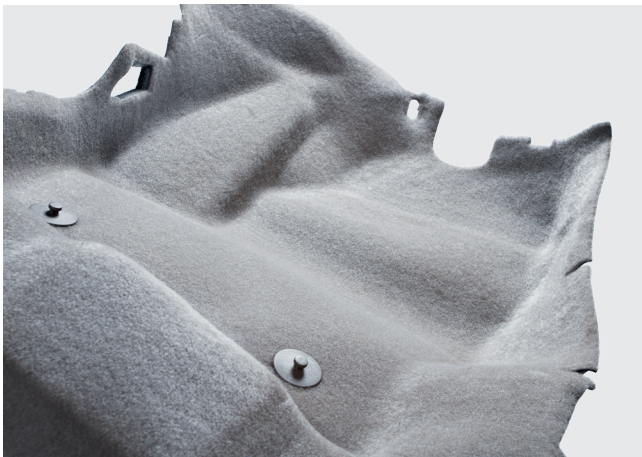
## Clean-Tuft and Di-Light

Wear-resistant and attractive look and feel

**Carpet systems for vehicles.** Autoneum offers multifunctional carpet systems that reduce noise entering the passenger compartment from the road or powertrain and in doing so help to enhance driving comfort. The Company produces both tufted carpets that are primarily applied in higher vehicle classes (i.e. Clean-Tuft) and non-woven carpets for small and midrange vehicles (i.e. Di-Light). Whether tufted or non-woven, Autoneum's carpet systems are dirt-resistant and durable and meet the high aesthetic requirements of customers concerning vehicle quality. Thanks to their lightweight, they correspondingly reduce the weight of the vehicle, resulting in lower fuel consumption and vehicle emissions.

**Clean-Tuft.** Tufted carpets based on Clean-Tuft are easier to clean: Small particles such as splinters or needles can be removed more easily and stain resistance against liquids is improved. They are also durable and offer high quality appearance and optimized haptics.

**Di-Light.** Autoneum offers a more durable non-woven carpet thanks to its great abrasion resistance and resilience. Di-Light carpets are based on newly developed fibers. Depending on the product variant, they consist of up to 97% of recycled PET which is reflected in the carpet's excellent environmental performance.



Di-Light: Autoneum's latest non-woven carpet innovation

## Hybrid-Acoustics

Unique combination of absorption and insulation

**Acoustic absorption and insulation.** Hybrid-Acoustics provides automobile manufacturers with a versatile acoustic solution for inner dashes, floor insulators and wheelhouse inner liners. This hybrid technology for vehicle interiors offers a unique performance-to-weight ratio: Hybrid-Acoustics is up to 50% lighter than conventional solutions, thus the lightest hybrid technology on the market. Furthermore, it consists largely of recycled materials, which reduces CO<sub>2</sub> emissions during the production process.

**Tuning the performance of components.** Thanks to a dynamic stiffness-controlled layer (DSL), Hybrid-Acoustics does not require heavy layers. This enables local tuning of the acoustic properties to maximize absorption or insulation performance – simply by adjusting the DSL thickness.

As a result, Autoneum's Hybrid-Acoustics technology offers a large number of possible design shapes and performances, from mostly insulating to mostly absorbing. Using statistical energy analysis (SEA) simulations that take the available packaging space into account, the acoustic load and the part's environment are used to tune the acoustic performance and define the design of the components. This ensures optimal interior acoustics and driving comfort.



Inner dash based on Hybrid-Acoustics

For further information, please contact: Autoneum | Global Product Management Interior Floor | [interior-floor@autoneum.com](mailto:interior-floor@autoneum.com) [www.autoneum.com](http://www.autoneum.com)

