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A smart and flexible solution for road and rail vehicles.

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#### Quality Heating Systems Shaped to Your Needs

Custom-designed and configured flooring, fit to any shape or required heating density. Made with non-toxic and recyclable materials that guarantee excellent long-term performance. COMFLOOR® is safety-tested, approved, and complies with common fire and smoke standards.

#### Heavy Load-Bearing Capability

Lightweight, strengthened system/unit translates into increased load-carrying capabilities of up to 700 kg per sqm.



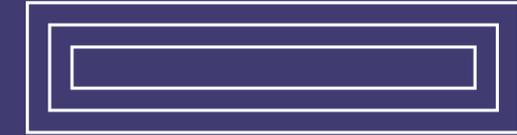
#### Your Passengers Will Thank You

- More spacious vehicle cabins mean **extra legroom and increased comfort**, compared with other conventional solutions
- **Quicker, more efficient, evenly distributed cabin heating**, made possible by optional panel-integrated heating systems
- **Internal noise level is minimized** due to foam core components.
- **Superior cabin interior aesthetics and ergonomics** mean happy and relaxed passengers



**Mobility**

# COMFLOOR®



Lightweight modular  
flooring system  
for rail and road vehicles

[www.3acompositesmobility.com](http://www.3acompositesmobility.com)



**Mobility**

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# COMFLOOR®

Our solution for spacious, ergonomic rail cabins. Lightweight, modular, strong, and innovative, COMFLOOR® is already trusted and used by many leading European automotive and rail manufacturers. Our design's unique clamping system ensures quick, easy assembly and installation. Units are maintenance-free and ensure reliable, exceptional service over at least a 30 year lifetime.



lightweight



passenger comfort



energy efficiency



long lifetime



customization



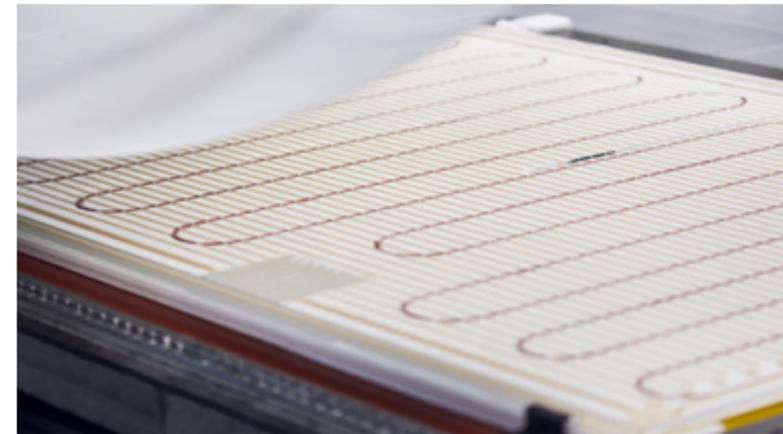
simple installation



recyclable



fire protection



## Custom-Made Panels

Thin, durable panels are made to order, designed to fit all floor shape and size specifications. Long-lasting, stiff sandwich panels with solid insulation, and optionally equipped with a fully integrated, foil-thin heating system. Heated and non-heated panels can be combined to choice.



# Overview

COMFLOOR® includes an optional panel-integrated heating system. Bonded to the panel's foam core, the heating system is also custom-made to match any panel's shape and specifications.

## Even Heat Distribution, Increased Comfort

The module's internal structure ensures even and efficient thermal transfer to the cabin area. The panel's foam core insulates the heating system towards the surrounding area, while an aluminium layer optimizes the warm air flow and directs it upwards into the cabin. **The result is a pleasant, evenly heated space delivered with efficient and minimized energy consumption.**

Cover sheets **ensure optimum protection against moisture, scratches, cracks, breakage, and mechanical damage.** They also provide superior thermal transfer conditions for quicker and more efficient cabin heating. Their smooth surface proves ideal for even adhesive application for all types of bonded floor coverings.



## System Powering

Modules are equipped with **quick-to-install electric connectors**, simplifying the replacement process in the case of any future panel changes. All electrical cables are fully integrated into the module, and are made in accordance with available voltages within the vehicle's wiring system.

**The system's power supply depends on the voltages supplied by the vehicle's electrical system** – such as 120, 230, 400, and 680 volts AC or DC. **Panels can additionally be equipped with temperature regulation sensors and thermostats to control temperature.**

**Each panel is 100% tested before shipment.**

## COMFLOOR® in Use

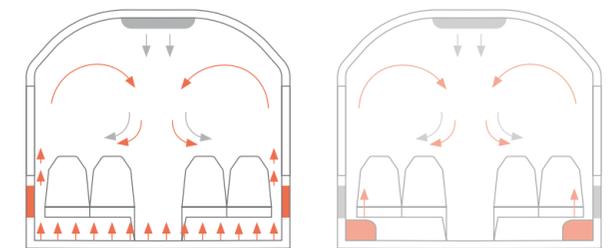
- **Low weight** reduces railcar tar mass by up to 750 kg per unit
- Lower tar mass in each unit enables **energy-saving**; reduces wear on vehicle tracks, wheels, axles and brakes
- Lowered overall vehicle weight **allows a higher payload**
- Strong, durable construction provides dependable, **maintenance-free service for up to 30 years**
- **Quick, even and effective thermal transfer** and insulation support heating system efficiency
- Unique clamping system and an overall lesser number of parts **shorten assembly time by up to 80%**
- Load-bearing floor plates with integrated heating and thermal insulation mean **less insulation materials**
- Made of **eco-friendly, recyclable materials**
- Thin, lightweight panels **ideal for double-deck rail cars or buses**
- Protective braiding ensures **current-carrying heating wires are completely shielded**; all electric and magnetic emissions are absorbed and dissipated
- Less insulation materials make for more spacious cabins, meaning **more headroom and legroom for passengers**
- **High performance in different heating densities**: even and efficient heat transfer and flow made possible by integrated panel heating
- **Heated and non-heated floor plates can be combined and placed depending on needs**
- **Simple "plug and play" assembly**: just plug it into your electric heated power source and fix the clamp profile

## COMFLOOR® in Service

- **Efficient heating system & even heat distribution**
- Solid protection **against overheating, vandalism and damage**
- **Water resistance** supports easy cleaning
- Maintenance and repair time **reduced to a minimum**
- Modern solutions **provide increased passenger comfort**
- Used and trusted **by leading European rail manufacturers**
- Plate cover sheets **provide optimum protection against external damage**

## COMFLOOR® Integrated Panel Heating

- Even heat distribution
- More passenger legroom and headroom
- Lower energy consumption and weight reduction
- Zero cleaning costs
- Reduced CO<sub>2</sub> results in a green footprint



COMFLOOR® Heating System

Conventional Heating