

# Diab Group

## Elevating Rail Travel with Sustainable Lightweight Solutions: Meet Diab at InnoTrans 2024

As the transportation industry evolves, the focus on sustainability and efficiency becomes increasingly critical.

For over 70 years, Diab has developed, improved and fine-tuned our cores and sandwich technology with a solid focus on sustainability, turning us into the market leader in many areas. We have also grown into a total solutions partner that provides complete end-to-end services, from technical and design support to creating kits ready for your production.

At InnoTrans 2024, we will showcase our innovative recyclable Divinycell PR sandwich core materials and all our services, highlighting advancements poised to significantly impact the rail industry.

### Innovative Core Materials for a More Sustainable Rail Industry

Our Divinycell PR sandwich core materials are engineered to support the creation of lighter train structures. This reduction in weight can lead to notable decreases in fuel consumption and carbon emissions, which can contribute to lower operational costs and a reduced environmental footprint.

#### Key Benefits:

**Lightweight Design:** Divinycell PR is designed to provide the necessary strength without adding excessive weight, potentially enhancing payload capacity and range in rail applications.

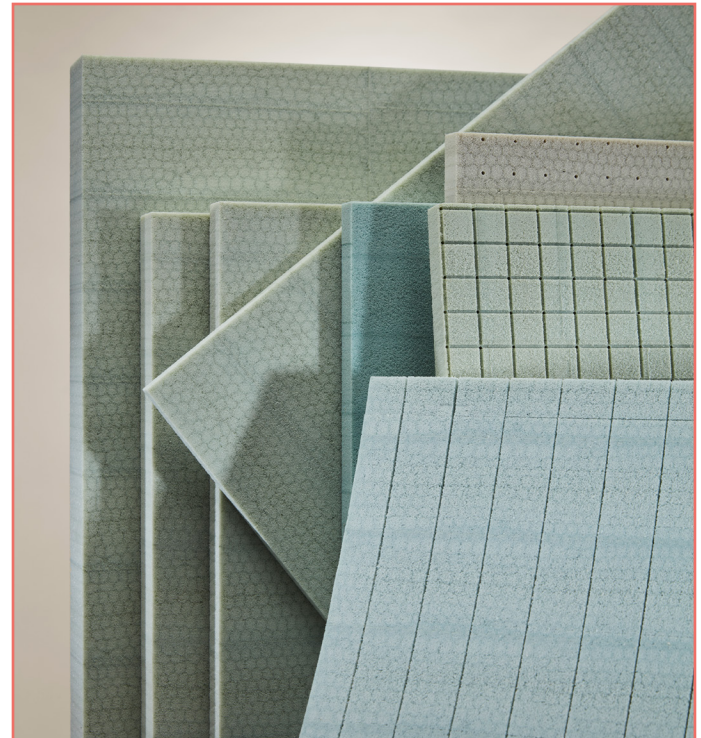


**Non-Organic Composition:** The core's non-organic nature eliminates the risk of rotting, which can be a concern in various environments.

**Insulation Properties:** Divinycell PR offers enhanced insulation capabilities, which can benefit train interiors by contributing to energy efficiency and passenger comfort.

**Fire Safety:** Compliance with EN45545-2 standards ensures that the Divinycell PR meets stringent fire safety requirements, which is crucial for rail applications. Several alternatives exist to achieve a lightweight, sustainable solution with aluminium, HPL or fibre-reinforced composite skins in combination with fire-retardant resins.

**Full Recyclability:** The 100% recyclable Divinycell PR reflects a commitment to sustainability and supports a circular economy.



## A Commitment to Excellence and Safety

Our PET core materials are designed to withstand rigorous structural demands while ensuring compliance with fire safety standards. Their versatility makes them suitable for various applications within the rail industry, from floors to interiors and exterior components.

## Proven Performance in Rail Applications

Our core materials have been integrated into several rail projects, demonstrating their robustness and versatility. These real-world applications highlight the materials' performance and safety, making them a viable option for train manufacturers.

## Proven Design and Engineering of Fastening

In lightweight applications, reliable fastening is a must. Diab has investigated different fastening methods like screws and various types of inserts and can recommend verified techniques for fixating elements that carry load. Using extensive lab testing, Diab created design procedures that include real-life circumstances like pull

out, shear, ageing and fatigue. With Diab's know-how, we can engineer fastening solutions that contribute to lighter and more sustainable composite applications.

## Join Diab at InnoTrans 2024

We will be at InnoTrans 2024 in Berlin from September 24 to 27. Visit **Hall 5.1, Stand 410**, to learn about Diab's innovative products and how they might contribute to sustainable solutions in the rail industry.

## Always at the Core of Your Solution

At Diab, we are committed to providing solutions to our clients and sharing our knowledge and extensive experience in sandwich structures. With industry-leading competence, the broadest range of stronger, lighter, smarter core materials and a global presence, we continue to support advancements in various industries, including rail transportation.

To find out more about Diab Group visit  
[www.diabgroup.com](http://www.diabgroup.com)



# ON THE RIGHT TRACK TO SUSTAINABLE TRAINS

Discover the future of sustainable rail travel with Diab's cutting-edge PET core materials. Engineered for lighter train designs, our full range of 100% recyclable Divinycell PR core material combined with our sandwich engineering reduces fuel and energy consumption, enhances payload capacity, and extends range. Experience unparalleled insulation, fire resistance (EN45545-2 qualified), and minimal maintenance costs.

Visit us at InnoTrans 2024 in Berlin  
Hall 5.1, Stand 410  
Elevate your rail applications  
with Diab.

