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Always on the right track



**CORE
MATERIALS**

Tailored solutions for
RAIL

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Best performance and value for Rail applications

Best total cost of ownership

Railways are designed to last for dozens of years on end. This means countless trips with numerous acceleration and deceleration cycles every single day. Lightweight design considerably helps in reducing energy demand as well as wear and tear of railway systems. It is therefore a great lever on the life cycle costs of these sustainable transport systems. In regard to maintenance costs, non-metal solutions have an additional edge besides their light weight due to their non-corrosive nature. Additionally, sandwich constructions offer thermal insulation and well as the possibility to integrate further functional modules such as heating etc. With our **Hybrid Core Concept**[®], **3A Composites Core Materials** has the product portfolio, the expertise and the toolset to optimally support our customers in this crucial design phase.

Our **AIREX**[®] and **BALTEK**[®] products offer you 6 top advantages:

- / Good fire resistance (NF, DIN5510, EN45'545)
- / Great weight saving potential
- / Ease of processing
- / Excellent fatigue and long-term stability
- / Inherent insulation
- / Total Cost of Ownership

We use our extensive know-how in the field of core materials and sandwich construction to provide best performing solutions for the challenging railway applications. For us, the deep understanding of the fundamental requirements of our customers and their applications is the basis for a fruitful customer service. Based on this we can then offer solutions that are best suited to optimally meet or exceed our customers different needs. The result is an optimized material solution that will support our customers to be even more successful in their markets.

Our material solutions offer their advantages to virtually any railway segment such as:

- / Tramways
- / Metros
- / Regional trains
- / Intercity trains
- / High speed trains



Our Rail Portfolio

Especially suitable materials

Numerous applications in railway systems lend themselves for sandwich applications:

- / Floors
- / Claddings
- / Compartment walls
- / Front-ends
- / Doors
- / Skirts and covers
- / Toilet modules

For railway applications fire resistance is a key requirement. This property greatly depends on the sandwich design, i.e. on the skin and resin as well as the core material and also on the respective thicknesses. While sandwiches with metal skins easily show excellent fire resistance, the material solution for fiber composite sandwiches needs special attention. **3A Composites Core Materials** has gained a vast experience in the design of fire resistant sandwich constructions.

The following core materials are especially suited for fire resistant railway applications:

- AIREX[®] T90** Fire resistance
Lightweight
High fatigue strength

- BALTEK[®] SBC** Extremely strong and rigid
From 3A Composites plantations
Good fire retardancy
Global availability
Renewable resource

- AIREX[®] R82** Especially light
Outstanding fire resistance
High temperature performance

- AIREX[®] TegraCore™** Outstanding fire-resistance and
OSU heat release
Processable at very high temperature
Easy forming and manufacturing

Our core materials can be delivered with various finishing options for easy handling, efficient processing, maximum resin savings and best laminate aesthetics.

3A Composites Core Materials owns and manages through its forest companies, Plantabal S.A. and 3A Composites PNG Ltd., several thousand hectares of FSC[®]-certified balsa wood plantations in Ecuador (FSC-C019065) and Papua New Guinea (FSC-C125018).

3A Composites Core Materials is a global organizational unit within the 3A Composites Group, a part of Schweiter Technologies (SIX Swiss Exchange: SWTQ), with operations in Europe, the Americas, China, and Papua New Guinea.

Stronger, lighter, greener future

3A Composites Core Materials is a global leader with the broadest portfolio of high-performing and sustainable core materials with main focus on PET foam and balsa wood. We are the pioneers in sandwich technology with more than 75 years of experience.

Since the very beginning, our focus has been developing strong and solid, yet lightweight core materials, which allow manufacturing more durable, sustainable and energy-efficient end products for our customers.

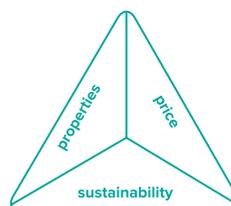
Our products also have the purpose of creating a stronger, lighter and greener future.

We have innovation deeply planted in our core

Each of our products is a result of profound expertise and advanced thinking of our engineers, working in partnership with our customers and leading experts and research institutes. We shape the industry trends and keep our offer at the cutting edge of technology.

We want to make the industry greener

Our commitment to sustainability is deeply ingrained in all aspects of our business, from developing sustainable products to protecting the natural environment and cultural heritage of the communities we work in.



Hybrid Core Concept[®]



The mark of responsible forestry



The mark of responsible forestry