AIREX® T92 Seal*X*

Save resin to the Max!

AIREX® T92 Seal*X* - setting new standards in resin uptake and total cost control

Sandwich core materials require resin or any other adhesive to optimally bond to the skin material. The core-skin adhesion is based on chemical as well as mechanical bonding - the latter resulting from resin anchoring in the core material's rough surface structure.

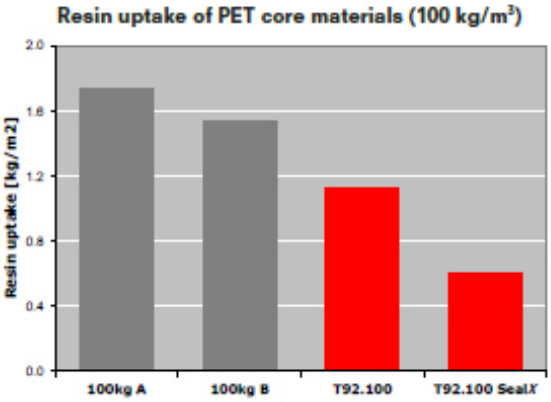
While a sufficient core-skin adhesion requires a certain amount of resin, any additional resin uptake on the core material's surface represents both extra cost and weight – especially in resin flow methods (e.g. infusion).

Today's AIREX® T92 already features a best-in-class resin uptake. The new AIREX® T92 Seal*X* technology constitutes a breakthrough innovation in further reducing the resin uptake by up to 50%. The new AIREX® T92 Seal*X* hence creates a completely new class of PET cores which translates into substantial reduction in resin weight and cost.

In many applications such as marine, industrial and wind turbine blades, resin infusion processes are increasingly used for sandwich production. Resin consumption on the core material's surface has thus become a focal point. AIREX® T92 Seal*X* is specifically optimized to respond to these customers' requirements.

Considerable savings

The following diagram illustrates the resin uptake of different PET core materials in the 100 kg/m³ density range. With a mere 0.6 kg/m² the new AIREX® T92 Seal*X* clearly outpaces any available PET core material and sets totally new standards.



While AIREX® T92 already features a best-in-class resin uptake, the new AIREX® T92 Seal*X* sets a whole new standard.

Per square meter of sandwich structure, AIREX® T92 Seal*X* can reduce the resin uptake by around 1.0 kg. Over the entire structure this allows to substantially reduce a product's weight and cost - a rare combination! The application example (see table aside) illustrates these savings for a larger application.

AIREX® T92 Seal*X* at a glance:

- Resin uptake reduced by up to 50 %
- Substantial reduction in weight and cost
- High core-skin adhesion, unchanged by new Seal*X* technology
- Designed for resin flow processes (e.g. infusion)

3A COMPOSITES CORE MATERIALS

Photographic documentation of Seal*X* technology

The following two graphics impressively illustrate the surface sealing effect of the new Seal*X* technology.

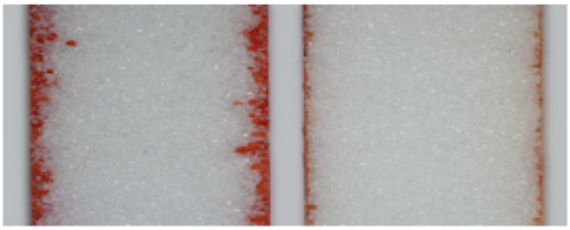


Photo of infused PET core materials with red-colored resin and removed skins. Commercially available PET foam 100 kg (left) vs. AIREX® T92 Seal*X* (right).

Proven and tested

New AIREX® T92 Seal*X* has been extensively tested and proven. T92 Seal*X* is used in wind rotor blades, boats, bridge construction, automotive application to name just a few. In all applications Seal*X* proves its weight and cost saving protential and its easy and safe use. With the dramatic reduction of resin uptake, the core-skin adhesion was a prime focus. Despite the reduced resin uptake, AIREX® T92 Seal*X* features the same excellent skin adhesion as any conventional PET core material. Furthermore, all mechanical properties of the core – including fatigue resistance – are unaffected by the new Seal*X* technology thus assuring a smooth transition for customers wishing to profit from this new product.

Application example:

Wind turbine blade or yacht: Infused sandwich area of 100 m²	
Resin uptake with current PET	160 kg
Resin uptake with AIREX® T92 Seal*X*	60 kg
Net resin economy in weight (+ cost)	100 kg

Innovation is our core business

As a leader in lightweight sandwich solutions, 3A Composites and Airex AG are constantly striving to anticipate customers' future requirements and to exceed their expectations. And we believe we have - once again - achieved just this with the development of our new AIREX® Seal*X* PET sealing technology.

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