

ArmaForm[®] Eco - the sustainable PET foam core for structural insulation application

Climate protection and sustainability are shaping the political agenda worldwide. Embracing responsibility for future generations means to focus on the need for sustainable construction using materials and structures which offer long-term performance. Designing energy-efficient composite sandwich structures are a powerful way of saving energy and reducing CO₂ emissions. This leads to higher and specific requirements to the core material in use, in particular the core's long-term insulating properties and mechanical performance. Armacell is following the growing demand for high-performance insulating materials and offers with ArmaForm Eco a core foam that combines strength, stiffness and thermal insulation with process versatility and design flexibility, as well as outstanding sustainability.



Markets



The use of ArmaForm Eco in wall, roof or floor composite sandwich panels of refrigerated truck bodies prevents energy loss during temperature controlled transportation and supports heavy cargo loads experienced during loading and dynamic loads during operation.

The sustainable foam core

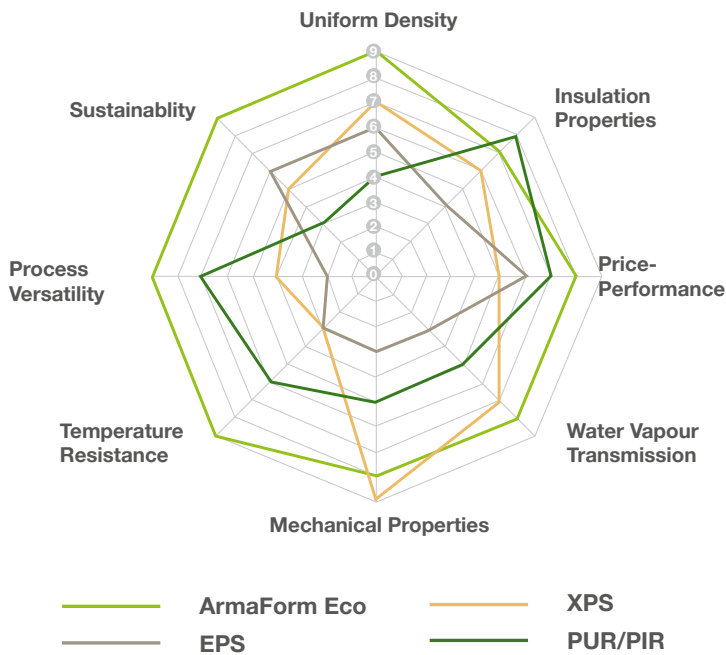


Thanks to Armacell's patented r-PET technology, ArmaForm Eco is made from 100% recycled PET, more precisely from recycled beverage bottles, millions of which are in circulation

all over the world. Like all our PET foam products, it is manufactured and processed in an eco-friendly manner without using CFCs or HCFCs. We re-use 100% of our material process loss by recycling internally and the product is again fully recyclable after its use phase. ArmaForm Eco represents a truly sustainable solution, enabling Armacell and its customers to present a real green alternative to comparable materials in the market.



ArmaForm Eco is a suitable core for all kinds of prefabricated structural insulated panels in the building envelope and internal partitions. In addition to its long-term insulation and structural integrity, additional key benefits are its thermo formability into curved shape and its versatility with almost any type of finishing options.



Primary benefits

- > High water resistance guarantees stable thermal conductivity even after many years of operation.
- > The closed-cell structure minimizes moisture penetration to ensure long-term corrosion protection and minimal maintenance requirements.
- > Compatibility with various production methods (e.g. infusion or pre-preg) and all common resin systems, as well as curing temperatures up to +180°C, taking into account individual manufacturing processes and the most varied material combination.
- > Its solvent stability makes ArmaForm Eco resistant to most acids, salts and fuels.

ArmaForm Eco: preliminary technical data

Density	ISO 845	kg/m ³	48 +/- 10
Compression Modulus	ISO 844	MPa	7
Compression Strength	ISO 844	kPa	170
Shear Modulus YZ	ISO 1922	MPa	4,5
Shear Strength YZ	ISO 1922	kPa	260
Shear Elongation YZ	ISO 1922	%	20
Shear Modulus XZ	ISO 1922	MPa	7
Shear Strength XZ	ISO 1922	kPa	320
Shear Elongation XZ	ISO 1922	%	18
Tensile Modulus	ASTM C 297	MPa	10
Tensile Strength	ASTM C 297	kPa	500
Thermal Conductivity	EN 12667	W/m-K	0,028 at 10°C
			0,027 at 20°C
			0,025 at 40°C
Reaction to fire	EN 13501-1	Class	E

Dimensions

Board size	mm
Tolerances	mm

Length

2.445
-7/+20

Width

1.015
-12/+5

Thickness

50
+/-0,7

All data and technical information are based on results achieved under typical application conditions. It is the customer's responsibility to verify if the product is suitable for the intended application. The responsibility for professional and correct installation and compliance with relevant building regulations lies with the customer. By ordering/receiving product you accept the Armacell General Terms and Conditions of Sale applicable in the region. Please request a copy if you have not received these.

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