



## TECHNICAL DATA

# ArmaPET<sup>®</sup> Eco

ArmaPET Eco combines insulation and structural integrity, ensuring energy and emission efficiency for decades of use.

- // Secured lifetime insulation performance
- // Prevents degradation by moisture, rodents and insects
- // Robust material allows fast and easy handling
- // 100% recycled material supports industry environmental and sustainability directives
- // Full range availability anywhere and at any time

[www.armacell-core-foams.com](http://www.armacell-core-foams.com)



 **armacell**<sup>®</sup>  
ArmaPET<sup>®</sup>

# ARMAPET ECO

Energy-efficient composite sandwich structures are a powerful way of **saving energy and reducing CO<sub>2</sub> emissions**. Armacell is following the growing demand for high-performance insulating materials and with ArmaPET Eco it offers a foam core that optimally combines structural performance, versatility, sustainability, and long-term insulating properties.

The potential list of applications using ArmaPET Eco is practically endless, from super-structures of refrigerated and recreational vehicles, to industrial halls, radomes, bath pods, food trolleys and many more.

ArmaPET Eco cored sandwich panels improve the performance, functionality and sustainability of the final application in many ways:

- // Long-term stability of insulation properties and low thermal conductivity secure lifetime insulation performance
- // Closed cell structure minimises moisture penetration and degradation by rodents and insects
- // Compatibility with most production methods and resin systems allows for individual manufacturing processes and material combinations
- // Solvent stability provides resistance to most acids, salts and fuels
- // The homogenous surface solves possible print-through challenges when using thin and glossy outer skins
- // Low weight makes it possible to build lighter vehicles and maximise the payload
- // Excellent screw retention allows for conventional fixing methods

## FOR CONSTANT TEMPERATURE

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Wherever efficiency and safety in the refrigeration supply chain are required, or resource-saving construction is called for, Armacell offers a full range of eco-efficient product solutions, providing benefits in energy consumption and emissions during temperature-controlled operation.

ArmaPET Eco in the superstructure of caravans and mobile homes keeps the loss of heat and cold to a minimum, ensuring a comfortable stay. Additionally, ArmaPET lowers the structural weight, thus enhancing fuel consumption, reducing CO<sub>2</sub> emissions or increasing payloads, all key drivers for reduced overall life-cycle costs.

## FOR SUSTAINABLE BUILDING

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

ArmaPET Eco helps create buildings that are more energy efficient, durable, faster to build, and have a lower lifecycle cost and reduced environmental impact.

# Technical Data

# ArmaPET Eco

			Eco50*	Eco65	Eco75	Eco95	Eco110	Eco130	Eco145	Eco195
<b>Density</b>	<b>ISO 845</b>	kg/m <sup>3</sup>	48 <sup>(1)</sup>	65 <sup>(1)</sup>	75 <sup>(2)</sup>	95 <sup>(2)</sup>	110 <sup>(2)</sup>	130 <sup>(2)</sup>	145 <sup>(3)</sup>	195 <sup>(3)</sup>
		lb/ft <sup>3</sup>	3.0 <sup>(1)</sup>	4.1 <sup>(1)</sup>	4.7 <sup>(2)</sup>	5.9 <sup>(2)</sup>	6.9 <sup>(2)</sup>	8.1 <sup>(2)</sup>	9.1 <sup>(3)</sup>	12.2 <sup>(3)</sup>
<b>Compression Strength Z</b>	<b>ISO 844</b>	MPa	0.15	0.2	0.3	0.45	0.6	0.8	1.05	1.8
		psi	22	30	45	65	85	115	150	260
<b>Compression Modulus Z</b>	<b>ISO 844</b>	MPa	3	9	13	15	21	32	43	66
		psi	435	1'305	1'885	2'175	3'045	4'640	6'235	9'570
<b>Shear Strength YZ</b>	<b>ISO 1922</b>	MPa	0.35	0.3	0.4	0.5	0.55	0.7	0.85	1.15
		psi	50.8	45	60	75	80	100	125	165
<b>Shear Modulus YZ</b>	<b>ISO 1922</b>	MPa	11	5	9	11	14	18	24	34
		psi	1'595	725	1'305	1'595	2'030	2'610	3'480	4'930
<b>Shear Elongation YZ</b>	<b>ISO 1922</b>	%	10	15	14	12	10	8	7	5
		%	10	15	14	12	10	8	7	5
<b>Shear Strength XZ</b>	<b>ISO 1922</b>	MPa	0.3	0.3	0.45	0.6	0.75	0.9	1.1	1.25
		psi	43.5	45	65	85	110	130	160	180
<b>Shear Modulus XZ</b>	<b>ISO 1922</b>	MPa	7	8	13	18	23	30	34	41
		psi	1'015	1'160	1'885	2'610	3'335	4'350	4'930	5'945
<b>Shear Elongation XZ</b>	<b>ISO 1922</b>	%	9	10	8	8	8	7	7	4
		%	9	10	8	8	8	7	7	4
<b>Tensile Strength Z</b>	<b>ASTM C 297</b>	MPa	0.9	0.55	0.7	1.05	1.2	1.35	1.5	1.9
		psi	130.5	80	100	150	175	195	220	275
<b>Tensile Modulus Z</b>	<b>ASTM C 297</b>	MPa	45	11	14	22	32	40	47	70
		psi	6'525	1'595	2'030	3'190	4'640	5'800	6'815	10'150
<b>Thermal Conductivity</b>	<b>at 23 °C</b>	W/(m·K)	0.030 <sup>(4)</sup>	0.031 <sup>(4)</sup>	0.031 <sup>(4)</sup>	0.032 <sup>(4)</sup>	0.032 <sup>(4)</sup>	0.034 <sup>(4)</sup>	0.035 <sup>(4)</sup>	0.038 <sup>(4)</sup>
	<b>at 73.4 °F</b>	BTU.in/FT <sup>2</sup> .hr.°F	0.208 <sup>(4)</sup>	0.215 <sup>(4)</sup>	0.215 <sup>(4)</sup>	0.222 <sup>(4)</sup>	0.222 <sup>(4)</sup>	0.236 <sup>(4)</sup>	0.243 <sup>(4)</sup>	0.264 <sup>(4)</sup>
<b>Reaction to fire</b>	<b>EN 13501-1</b>	Class	E <sup>(5)</sup>	E <sup>(5)</sup>	E <sup>(5)</sup>	E <sup>(5)</sup>	E <sup>(5)</sup>	E <sup>(5)</sup>	E <sup>(5)</sup>	E <sup>(5)</sup>

## Board dimensions

**Standard = 1015 x 2448 mm / 39.96 x 96.38 inch.**

Customer specific dimensions available on request.  
Board thickness is depending on the density.

**Tolerances** at room temperature

Width = +/- 10 mm +/- 0.39 inch

Length = -7/+20 mm -0.28/+0.79 inch

\* Preliminary data

(1) Tolerances: +/- 10 kg/m<sup>3</sup>, +/- 0.6 lb/ft<sup>3</sup>

(2) Tolerances: +/- 5 kg/m<sup>3</sup>, +/- 0.3 lb/ft<sup>3</sup>

(3) Tolerances: +/- 5%

(4) Based on a single test result. To be used for information only.

(5) Tested according to EN ISO 11925-2 at a thickness of 25 mm / 0.98 inch.

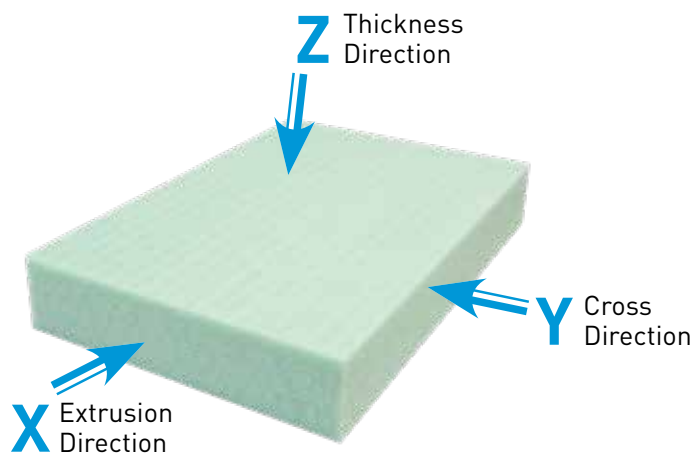
Further information available on request.

All values are average production figures. Based on extrusion thickness 55-66 mm, with changing extrusion thickness mechanical properties can vary.

Our products are CFC / HFC free.

Physical properties are not affected by variances in colour.

Customs tariff code: 39.21.19.00



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## ABOUT ARMACELL

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As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With 3,000 employees and 23 production plants in 15 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications and next generation aerogel blanket technology.

For more company information, please visit:  
[www.armacell.com](http://www.armacell.com)

For product information, please visit:  
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