



## TECHNICAL DATA

# ArmaForm<sup>®</sup> Core GR

Eco-friendly, lightweight PET foam boards for structural core applications. Made by Armacell's patented r-PET technology of producing PET foams, made of 100% recycled PET.

- // Fatigue resistance: threshold > 60%
- // High processing temperature: +150°C / +302°F
- // Limited density variation: less than 5%
- // Process versatility: infusion, pre-preg, all common resin systems
- // Thermo-formability: 3D-shaped or double curved sandwich panels
- // Sustainability: 100% recyclable after use phase

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



  
ArmaForm<sup>®</sup>

LIGHTWEIGHT CORE FOR STRONG STRUCTURES

# ArmaForm<sup>®</sup> Core

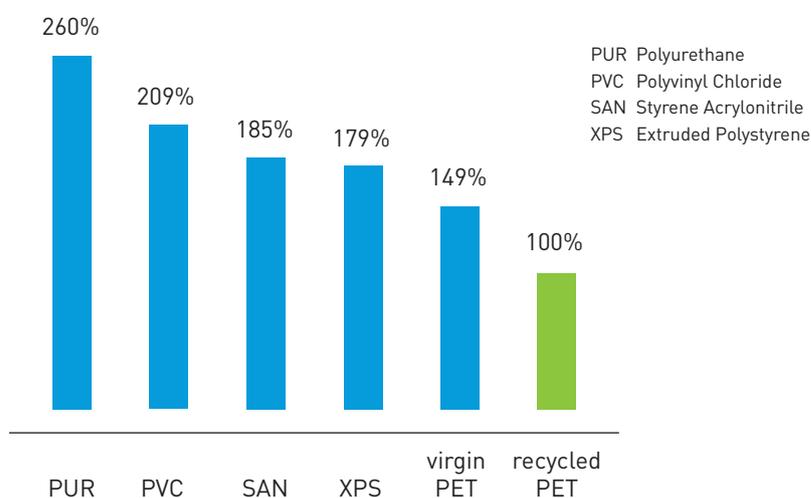
Armacell offers a wide range of innovative and eco-friendly structural foam cores combining lightweight and high mechanical strength in conjunction with residual flexibility and maximum service life. Made entirely of recycled PET bottles, ArmaForm Core is sustainable, 100% recyclable alternative to legacy materials.



**>33%**  
CO<sub>2</sub> EMISSION  
SAVINGS

## PATENTED PROCESS TECHNOLOGY WITH LOWEST CO<sub>2</sub> EMISSIONS

Using 100% recycled PET as a raw material base for our PET foam products delivers significant CO<sub>2</sub> emission savings:



## APPLICATION

The trend of designing environmentally-friendly composite structures which are light, strong and recyclable has led industrial designers, specifiers and composite manufacturers to accelerate the substitution of conventional core materials such as Balsa, SAN, PUR or PVC with our PET foam cores in a wide range of applications as diverse as wind turbine blades, train floors and truck bodies, building envelopes, boat hulls and surfboards.



# Technical Data ArmaForm® Core GR

Polyethylene Terephthalate based structural foam cores. Made from 100% post-consumer PET.

			GR70	GR80	GR100	GR115	GR135	GR150	GR200	GR250	GR320 <sup>(1)</sup>
<b>Density</b>	<b>ISO 845</b>	kg/m <sup>3</sup>	70 <sup>(2)</sup>	80 <sup>(2)</sup>	100 <sup>(2)</sup>	115 <sup>(2)</sup>	135 <sup>(2)</sup>	150 <sup>(3)</sup>	200 <sup>(3)</sup>	250 <sup>(3)</sup>	320 <sup>(3)</sup>
		lb/ft <sup>3</sup>	4.4 <sup>(2)</sup>	5.0 <sup>(2)</sup>	6.2 <sup>(2)</sup>	7.2 <sup>(2)</sup>	8.4 <sup>(2)</sup>	9.4 <sup>(3)</sup>	12.5 <sup>(3)</sup>	15.6 <sup>(3)</sup>	20.0 <sup>(3)</sup>
<b>Compression Strength</b>	<b>ISO 844</b>	MPa	0.75	1.0	1.5	1.8	2.3	2.6	4.0	5.3	7.0
		psi	110	145	220	260	335	375	580	770	1015
<b>Compression Modulus</b>	<b>ISO 844</b>	MPa	40	57	77	90	105	120	175	235	320
		psi	5'800	8'265	11'165	13'050	15'225	17'400	25'375	34'075	46'400
<b>Shear Strength <sup>(4)</sup></b>	<b>ISO 1922</b>	MPa	0.5	0.6	0.75	0.95	1.2	1.35	1.75	2.0	2.1
		psi	75	85	110	140	175	195	255	290	305
<b>Shear Modulus <sup>(4)</sup></b>	<b>ISO 1922</b>	MPa	13	16	21	26	35	37	51	70	90
		psi	1'885	2'320	3'045	3'770	5'075	5'365	7'395	10'150	13'050
<b>Shear Strain <sup>(4)</sup></b>	<b>ISO 1922</b>	%	15	13	10	10	7	7	5	3	2
		%	15	13	10	10	7	7	5	3	2
<b>Tensile Strength</b>	<b>ASTM C 297</b>	MPa	1.8	2.0	2.5	2.9	3.0	3.3	3.9	4.3	4.8
		psi	260	290	365	420	435	480	565	625	695
<b>Tensile Modulus</b>	<b>ASTM C 297</b>	MPa	66	80	120	140	140	185	235	270	350
		psi	9'570	11'600	17'400	20'300	20'300	26'825	34'075	39'150	50'750
<b>Thermal Conductivity</b>	<b>at 23 °C</b>	W/(m·K)	0.034	0.034	0.034	0.034	0.037	0.041	0.043	0.047	tdb
	<b>at 73.4 °F</b>	BTU.in/ FT <sup>2</sup> .hr.°F	0.236	0.236	0.236	0.236	0.257	0.284	0.298	0.326	tdb

## Tolerances

		Length	Width	Diagonal	Thickness
<b>Dimensions</b>	mm	2448	1008	<sup>(5)</sup>	GR70-GR150: 5-150mm GR200-GR320: 5-100mm
	inch	96.38	39.68	<sup>(5)</sup>	GR70-GR150: 0.2 - 5.91 GR200-GR320: 0.2 - 3.94
<b>At room temperature</b>	mm	+/- 5	+/- 5	≤ 4	≤ 100mm: +/- 0.5 ≥ 100mm: +/- 1
	inch	+/- 0.2	+/- 0.2	≤ 0.16	≤ 3.94: +/- 0.02 ≥ 3.94: +/- 0.04

(1) Preliminary data (indication based on a limited number of tests).

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

(3) Tolerances: +/- 5 %

(4) // direction (parallel to the weld)

(5) Depending on length and width combination.

All values are average production figures.

Minimum values on request.

Our products are CFC / HFC free.

Physical properties are not affected by variances in colour.

Customs tariff code: 39.21.19.00

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.

© Armacell, 2020. ArmaForm® is a trademark of the Armacell group.  
00253 | PET/W GFR | ArmaForm Core | TDS | 032020 | Global | EN Master

## ABOUT ARMACELL

---

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 3,135 employees and 24 production plants in 16 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 information, please visit: [www.armacell.com](http://www.armacell.com)

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

