



TECHNICAL DATA

ArmaPET™ Struct

ArmaPET Struct is the versatile and durable solution for structural sandwich applications, with a more environmentally responsible approach.

- // Proven and reliable performance since 2010
- // Minimal fluctuation in product properties increases process stability
- // Excellent thermal and dimensional stability facilitates repeatability in production
- // Outstanding fatigue resistance bolsters long-term performance and low lifetime maintenance
- // 100% recycled material supports industry environmental and sustainability directives
- // Full range availability anywhere and at any time

www.armacell-core-foams.com



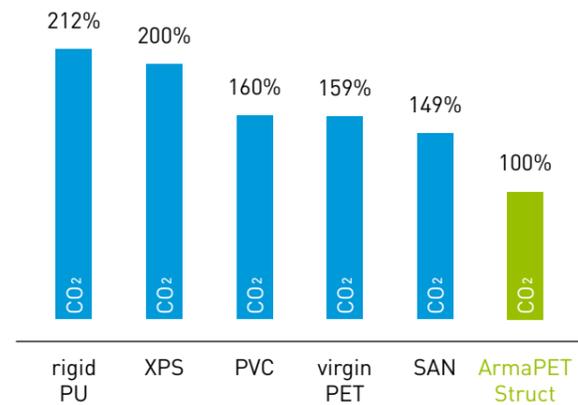
 **armacell**[®]
ArmaPET™

ARMAPET STRUCT

Provides a **unique combination of material and processing properties**, such as durability, elevated service temperature stability and excellent compatibility with most common resins and manufacturing methods.

PATENTED PROCESS TECHNOLOGY WITH LOWEST CO₂ EMISSIONS

Using 100% recycled PET bottles as the base raw material results in significant savings in CO₂ emissions and meets the industry's requirement for the design of sustainable composite structures that are light, durable and recyclable.



COMPLETE MONITORING FOR 100% RELIABILITY

We use state-of-the-art technology for production, control and monitoring in the ArmaPET manufacturing process. We have implemented fully integrated ERP and Six Sigma process monitoring systems, which enable full quality control of important product properties that are relevant for the reliable performance of the sandwich structure.

Automated, 100% in-line controls measure every single board to ensure that density variation is kept at a very low level (< 5%) and that the thickness lies within the tight tolerances. Each individual boards is subjected to in-line optical scanning for surface damage and impurities. And every single ArmaPET board produced is identified by a unique barcode, which ensures traceability from the final product back to the raw material used.

Technical Data

ArmaPET Struct GR

			GR70	GR80	GR100	GR115	GR135	GR150	GR200	GR250	GR320 ⁽¹⁾	
Density	ISO 845	kg/m ³	70 ⁽²⁾	80 ⁽³⁾	100 ⁽³⁾	115 ⁽³⁾	135 ⁽³⁾	150 ⁽⁴⁾	200 ⁽⁴⁾	250 ⁽⁴⁾	320 ⁽⁴⁾	
		lb/ft ³	4.4 ⁽²⁾	5.0 ⁽³⁾	6.2 ⁽³⁾	7.2 ⁽³⁾	8.4 ⁽³⁾	9.4 ⁽⁴⁾	12.5 ⁽⁴⁾	15.6 ⁽⁴⁾	20.0 ⁽⁴⁾	
Compression Strength	ISO 844	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	
Compression Modulus	ISO 844	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	
Shear Strength⁽⁵⁾	ISO 1922	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	
Shear Modulus⁽⁵⁾	ISO 1922	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	
Shear Strain⁽⁵⁾	ISO 1922	%	15	13	10	10	7	7	5	3	2	
		%	15	13	10	10	7	7	5	3	2	
Tensile Strength	ASTM C 297	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	
Tensile Modulus	ASTM C 297	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	
Thermal Conductivity		at 23 °C	W/(m·K)	0.034	0.034	0.034	0.034	0.037	0.041	0.043	0.047	tbd
		at 73.4 °F	BTU.in/FT ² .hr.°F	0.236	0.236	0.236	0.236	0.257	0.284	0.298	0.326	tbd

		Length	Width	Diagonal	Thickness
Dimensions	mm	2448	1008	⁽⁶⁾	GR70-GR150: 5-150mm GR200-GR320: 5-100mm
	inch	96.38	39.68	⁽⁶⁾	GR70-GR150: 0.2 - 5.91 GR200-GR320: 0.2 - 3.94
Tolerances at room temperature	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/+8 kg/m³, -0.3/+0.5 lb/ft³
 (3) Tolerances: +/- 5 kg/m³, +/- 0.3 lb/ft³
 (4) Tolerances: +/- 5 %
 (5) // direction (parallel to the weld)
 (6) 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

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00481 | Arma PET Struct | ArmaPET | C_TDS | 022021 | 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 company information, please visit:
www.armacell.com

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MAKING A DIFFERENCE AROUND THE WORLD