

NEXT GENERATION

# ArmaPET® Struct GRX

To take its patented rPET foaming technology to the next level, Armacell is introducing ArmaPET Struct GRX:

- // Optimised resin uptake improves the sandwich panel's weight and level of cost
- // 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

[www.armacell.com/about-armapet](http://www.armacell.com/about-armapet)



 **armacell**  
ArmaPET®



NEXT GENERATION

# ARMAPET STRUCT GRX

We take ArmaPET Struct to the next level, making  
100% recycled PET foam core more efficient!

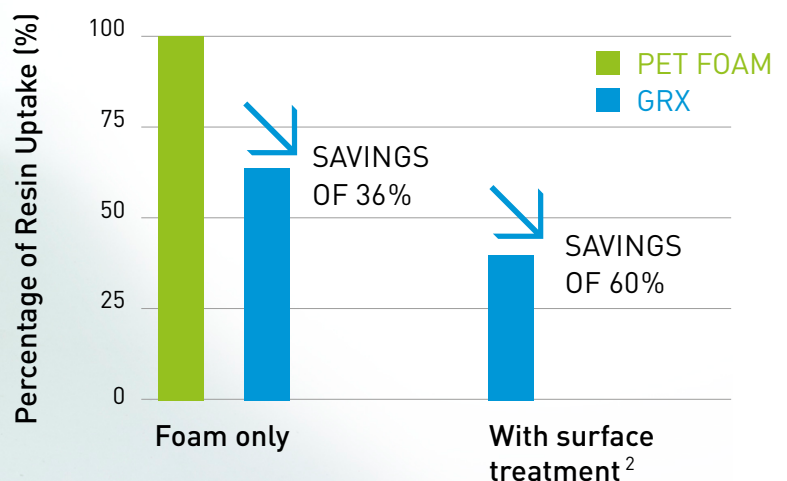
We strive for continuous improvement of our product solutions – based on our customers' needs. ArmaPET Struct GRX range features a more **homogenous and finer cell structure** in combination with **improved shear properties**. This next generation of structural foam core provides **significant savings in resin uptake** to further optimise weight and cost savings. Up to 60 % savings are expected when comparing to previous generations without surface treatment.

- // Homogenous and finer cell structure
- // Limited resin uptake
- // Weight savings of the final sandwich structure
- // Improved shear performance
- // Superior environmental performance compared to other PET-based insulating foams on the market

**-60%**  
RESIN  
UPTAKE

ArmaPET Struct GRX will be supplied with surface treatment as the default procedure if not agreed upon differently.

RESIN UPTAKE PERFORMANCE OF PET FOAM VS. ARMAPET STRUCT GRX<sup>1</sup>



<sup>1</sup> Measured as per Armacell internal test method, tested in foam only.

Resin uptake savings will be dependant on density (graph made with GRX100).

<sup>2</sup> Supplied with surface treatment as the default procedure if not agreed upon differently.

# Technical Data

Preliminary Nominal Values <sup>(1)</sup>

TYPE	STANDARD	UNIT	GRX55	GRX70	GRX80	GRX100	GRX115	GRX150	GRX200	GRX250	GRX320
<b>Density average</b>	ISO 845	kg/m <sup>3</sup>	55 <sup>(2)</sup>	70 <sup>(2)</sup>	80 <sup>(3)</sup>	100 <sup>(3)</sup>	115 <sup>(3)</sup>	150 <sup>(4)</sup>	200 <sup>(4)</sup>	250 <sup>(4)</sup>	320 <sup>(4)</sup>
		lb/ft <sup>3</sup>	3.4 <sup>(2)</sup>	4.4 <sup>(2)</sup>	5.0 <sup>(3)</sup>	6.2 <sup>(3)</sup>	7.2 <sup>(3)</sup>	9.4 <sup>(4)</sup>	12.5 <sup>(4)</sup>	15.6 <sup>(4)</sup>	20.0 <sup>(4)</sup>
<b>Compression Strength</b>	ISO 844	MPa	0.5	0.75	1.0	1.5	1.9	2.7	4.0	5.3	7.0
		psi	73	109	145	218	276	392	580	769	1015
<b>Compression Modulus</b>	ISO 844	MPa	60	80	100	130	150	190	230	270	320
		psi	8700	11600	14500	18850	21750	27550	33350	39150	46400
<b>Tensile Strength</b>	ASTM C 297	MPa	1.3	1.6	2.0	2.5	2.9	3.2	3.7	4.4	4.8
		psi	189	232	290	363	421	464	537	638	696
<b>Tensile Modulus</b>	ASTM C 297	MPa	40	60	75	120	140	185	245	300	350
		psi	5800	8700	10875	17400	20300	26825	35525	43500	50750
<b>Shear Strength <sup>(5)</sup></b>	ISO 1922	MPa	0.35	0.5	0.6	0.8	1.0	1.45	2	2.3	2.1
		psi	51	73	87	116	145	210	290	334	305
<b>Shear Modulus <sup>(5)</sup></b>	ISO 1922	MPa	9	14	16	23	30	43	67	80	90
		psi	1305	2030	2320	3335	4350	6235	9715	11600	13050
<b>Shear Elongation <sup>(5)</sup></b>	ISO 1922	%	17	15	14	12	10	8	6	4	2
<b>Thermal Conductivity</b>	at 23 °C	W/(m·K)	0.03	0.031	0.032	0.033	0.034	0.041	0.043	0.047	0.05
	at 73.4 °F	BTU.in / FT <sup>2</sup> .hr.°F	0.208	0.215	0.222	0.229	0.236	0.284	0.298	0.326	0.347
<b>Reaction to fire <sup>(6)</sup></b>	EN 13501-1	Class	E	E	E	E	E	E	E	E	E
<b>Board Dimensions</b>		<b>Length</b>		<b>Width</b>		<b>Diagonal</b>		<b>Thickness</b>			
	mm	2448		1008 1220 <sup>(7)</sup>		Depending on length & width combination		5 - 150 <sup>(8)</sup>			
	inch	96.68		39.68 48.03 <sup>(7)</sup>		Depending on length & width combination		0.2 - 5.91			
<b>Tolerances at room temperature</b>	mm	+/- 5		+/- 5		≤ 4		≤ 100 mm: +/- 0.5 ≥ 100 mm: +/- 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/m<sup>3</sup>, -0.3/+0.5 lb/ft<sup>3</sup>

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

(4) Tolerances: +/- 5 %

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

(6) Tested according to EN ISO 11925-2 at a thickness of 25 mm / 0.98 inch. Further information available on request.

(7) Available on request.

(8) Thickness in Suzhou plant is GRX70-GRX320: 5-150 mm, GRX55 can only be provided from 25mm. No half-board for thickness ≤ 5 mm in grade GRX70-GRX80.

Further information available on request. All values are average production figures.  
Surface treatment is not available for panels below 10 mm. Minimum values on request.  
Our products are CFC / HFC free. Only halogen-free flame retarded additives.  
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 the specific conditions defined according to the testing standards referenced. Despite taking every precaution to ensure that said data and technical information are up to date, Armacell does not make any representation or warranty, express or implied, as to the accuracy, content or completeness of said data and technical information. Armacell also does not assume any liability towards any person resulting from the use of said data or technical information. Armacell reserves the right to revoke, modify or amend this document at any moment. 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. This document does not constitute nor is part of a legal offer to sell or to contract.

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## ABOUT ARMACELL

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As the inventor of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal 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 more than 3,300 employees and 25 production plants in 19 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems.

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

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