

StruCell P-Series

DNV approved closed-cell PVC foam core

Closed-cell, crosslinked rigid PVC foam core for FRP sandwich construction. Designed for lightweight composite structures requiring reliable mechanical performance and clean processing.

Product Overview

Material Closed-cell, crosslinked PVC foam supplied as a structural core for fibre-reinforced composite laminates.	Processing Suitable for common composite manufacturing methods including hand lay-up, vacuum infusion, RTM, and controlled-temperature prepreg processes.	Formats Available as plain sheets and with common machining options such as perforated, grooved, slit, grid-scored, and contour-cut formats.
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Key Applications

Marine Hull, deck, bulkhead, and interior sandwich panels.	Wind Energy Rotor blade, nacelle cover, spinner, and fairing components.	Industrial Lightweight panels for transport, enclosure, and tooling uses.	Sports Kayak, paddle board, surfboard, and performance composite parts.
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Grade Range

P45 Nominal density 48 kg/m3	P60 Nominal density 60 kg/m3	P80 Nominal density 80 kg/m3	P100 Nominal density 100 kg/m3	P130 Nominal density 130 kg/m3	P200 Nominal density 200 kg/m3	P250 Nominal density 250 kg/m3
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Technical Properties

P-Series grade values | DNV type approved

Property	Test method	Unit	Basis	P45	P60	P80	P100	P130	P200	P250
Density (nominal)	ISO 845	kg/m3	Avg	48	60	80	100	130	200	250
Density	ISO 845	kg/m3	Min	43	54	72	90	120	180	225
Tensile strength	ASTM C297	MPa	Avg	1.4	1.8	2.5	3.5	4.5	7.1	9.2
Tensile strength	ASTM C297	MPa	Min	1.1	1.5	2.2	2.5	3.5	6.3	8.0
Tensile modulus	ASTM C297	MPa	Avg	55	75	95	130	175	250	360
Tensile modulus	ASTM C297	MPa	Min	45	57	85	105	135	210	320
Compressive strength	ISO 844	MPa	Avg	0.6	0.93	1.4	2.0	3.0	4.8	6.2
Compressive strength	ISO 844	MPa	Min	0.5	0.7	1.15	1.65	2.4	4.2	5.4
Compressive modulus	ISO 844	MPa	Avg	50	70	90	135	170	240	300
Compressive modulus	ISO 844	MPa	Min	45	60	80	115	145	200	240
Shear strength	ISO 1922	MPa	Avg	0.5	0.76	1.15	1.44	2.1	3.5	4.0
Shear strength	ISO 1922	MPa	Min	0.46	0.63	0.95	1.4	1.9	3.2	3.9
Shear modulus	ISO 1922	MPa	Avg	15	20	27	35	50	85	104
Shear modulus	ISO 1922	MPa	Min	12	16	23	28	40	75	88
Shear elongation at break	ISO 1922	%	Avg	10	20	30	25	25	30	30
Shear elongation at break	ISO 1922	%	Min	8	10	15	15	20	20	20
Heat resistance, shear retention at 60 deg C	ASTM C393	%	Min	>80	>80	>80	>80	>80	>80	>80
Water resistance, shear retention	ASTM C393	%	Min	>80	>80	>80	>80	>80	>80	>80

Notes

StruCell P-Series is DNV type approved for sandwich core material applications. Avg = specified average value at average density. Min = specified minimum value. Values are based on standard laboratory test methods and should be verified for the final laminate design, resin system, processing route, temperature exposure, and service environment.