

CoreLite® PET

Product Data Sheet

Last Revised: November 8, 2021

CoreLite® PET is a closed-cell PET foam specially formulated to provide high mechanical properties. It is made from recycled plastic bottles and delivers excellent performance. Engineered to meet the physical demands needed in high performance applications, including carrying static and dynamic loads. CoreLite® PET can be used as a replacement for Honeycomb and other Foams. It possesses excellent laminate-to-core bonding adhesion.

Resistance to fatigue is superior, as well as its chemical stability and UV resistance. Water absorption is minimal. CoreLite® PET can handle processing temperatures up to 150 °C (302 °F) . During high temperature processing it is thermally stable and no outgassing or expansion after post-cure occurs. In the event of fire, no toxic gases are generated.

PROCESSING

- Prepreg processing
- Resin infusion / injection (VARTM / RTM)
- Adhesive bonding
- Vacuum infusion
- Thermo-formable
- Hand Lay-up and Spray-up
- Compression molding (GMT, SMC)

APPLICATIONS

Marine: Hulls, Decks, Superstructures, Bulkheads, Interiors and Stringers

Wind Energy: Blades (shear webs & shells), Nacelles

Transportation: Primary Body Structure, Interior Structure, Sidewalls, Floors and Ceilings

Construction: Roof Panels, Support Wall Insulation and Door Laminate

Industrial: Covers, Containers, Local Reinforcements, X-ray tables, Sporting goods



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CoreLite® PET

Mechanical Properties for CoreLite® PET

TEST STANDARDS		Units (Imperial)	65	80	110	135	150	200	250	320
Nominal Density	ISO 845	Lbs. / cu.ft	4.1	5	6.9	8.4	9.4	12.5	15.6	20
Compressive Strength	ISO 844	psi	110	145	260	335	375	580	770	1015
Compressive Modulus	ISO 844	psi	5800	8265	13050	15225	17400	25375	34075	46400
Tensile Strength	ASTM C297	psi	260	290	420	435	480	565	625	695
Tensile Modulus	ASTM C297	psi	9570	11600	20300	20300	26825	34075	39150	50750
Shear Strength	ISO 1922	psi	75	85	140	175	195	255	290	305
Shear Modulus	ISO 1922	psi	1885	2320	3770	5075	5365	7395	10150	13050
Shear elongation at break	ISO 1922	%	15	13	10	7	7	5	3	2
Thermal conductivity at 75 °F	ASTM C177	BTU.in/ft2.hr.°F	0.236	0.236	0.236	0.257	0.284	0.298	0.326	0.340
Standard Sheet (Plain)	Length	inch	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4
	Width ^[1]	inch	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7
	Thickness	inch	1/8 to 4	1/8 to 4	1/8 to 4	1/8 to 4	1/8 to 4	1/8 to 4	1/8 to 4	1/8 to 4

Values shown are nominal average determined from independent laboratory and house testing. Tests are perpendicular to the plane.

[1] Sheet width is also available in 48" upon request.

Color:	Green	Green	Green	Green	Green	Green	Green	Green	Green
Density Tolerance:	+ / - 10%								
Water absorption	< 1%								
Processing temperature:	302 °F								

Disclaimer: The information and data presented herein are subject to revision. CoreLite Inc. reserves the right to release replacement data. The data presented is derived from in house and independent testing. Calculations should be verified with physical test. The data is provided without liability to CoreLite, Inc. or its agents and does not constitute warranty or representation in respect to the material or its use.

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Mechanical Properties for CoreLite® PET

TEST STANDARDS		Units (Metric)	65	80	110	135	150	200	250	320
Nominal Density	ISO 845	Kg. / m³	65	80	110	135	150	200	250	320
Compressive Strength	ISO 844	MPa	0,75	1,0	1,8	2,3	2,6	4,0	5,3	7,0
Compressive Modulus	ISO 844	MPa	40	57	90	105	120	175	235	320
Tensile Strength	ASTM C297	MPa	1,8	2,0	2,9	3,0	3,3	3,9	4,3	4,8
Tensile Modulus	ASTM C297	MPa	66	88	140	140	185	235	270	350
Shear Strength	ISO 1922	MPa	0,5	0,6	0,95	1,2	1,35	1,75	2,0	2,1
Shear Modulus	ISO 1922	MPa	13	16	26	35	37	51	70	90
Shear elongation at break	ISO 1922	%	15	13	10	7	7	5	3	2
Thermal conductivity at 24 °C	ASTM C177	W/m.K	0,034	0,034	0,034	0,037	0,041	0,043	0,047	0,049
Standard Sheet (Plain)	Length	mm	2448	2448	2448	2448	2448	2448	2448	2448
	Width ^[1]	mm	1008	1008	1008	1008	1008	1008	1008	1008
	Thickness	mm	3 to 100	3 to 100	3 to 100	3 to 100	3 to 100	3 to 100	3 to 100	3 to 100

Values shown are nominal average determined from independent laboratory and house testing. Tests are perpendicular to the plane.

[1] Sheet width is also available in 1220mm upon request.

Color:	Green	Green	Green	Green	Green	Green	Green	Green	Green
Density Tolerance:	+ / - 10%								
Water absorption	< 1%								
Processing temperature:	150 °C								

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Driven by innovation,
inspired by possibilities,
powered by nature,
built for you,
we are proud to make the most
sustainable core material on earth.

Learn more



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