

CoreLite® PVC

Product Data Sheet

Last Revised: December 14, 2015

CoreLite® PVC is a closed-cell, cross-linked polymer PVC foam formulated for durability, strength, and high processing temperatures. It is compatible with multiple resins and adhesives.

It has a very low water absorption rate and excellent chemical resistance. Ideal for many lightweight composite applications.

PROCESSING

- Hand lamination / spray lay-up
- Vacuum infusion
- Resin injection
- Adhesive bonding
- Pre-preg processing (up to 80 °C, 176 °F)
- Thermoforming



APPLICATIONS

Marine: hulls, decking, bulkheads, interiors superstructures

Transportation: floors, ceilings, doors, interiors, partition walls, sidewalls

Wind energy: rotor blades, covers, casings

Aerospace: fuselage and wind components, kitchen trolleys, galleys

Industrial: Covers, Containers, Tanks, Sporting goods, Tooling and Molds

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CoreLite® PVC

Mechanical Properties for CoreLite® PVC

TEST STANDARDS		Units (Imperial)	40	48	60	80	100	130	200	250
Density	ASTM D1622	Lbs. / cu.ft	2.5	3	3.75	5	6.24	8.12	12.5	15.7
Compressive Strength	ASTM D1621-10	psi	74	100	139	207	280	396	699	949
Compressive Modulus	ASTM D1621-10	psi	4061	4786	6672	9862	13053	18130	30168	40176
Tensile Strength	ASTM D1623	psi	107	138	306	377	447	553	935	1031
Tensile Modulus	ASTM D1623	psi	10733	12618	15374	19870	24511	31328	58885	62221
Shear Strength	ASTM C273	psi	65	80	112	164	216	294	497	677
Shear Modulus	ASTM C273	psi	1885	2321	3046	4206	5366	7107	11023	13924
Shear elongation at break	ASTM C273	%	5	9	13	20	25	32	41	40
Thermal conductivity at 75 °F	ASTM C-177	BTU.in/ft2.hr.°F	0.21	0.21	0.21	0.23	0.24	0.27	0.33	0.39
Standard Sheet (Plain)	Length	inch	107.5	107.48	96.45	85.83	80.71	74.80	63	59.1
	Width	inch	50.0	50	45.27	40.16	37.40	33.47	29.5	27.6
	Thickness	inch	1/8 to 3 ¼	1/8 to 2 ¾	1/8 to 2 ¾	1/8 to 2 ¾	1/8 to 2 ½	1/8 to 2	1/8 to 1 ¾	1/8 to 1 ¾

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

Color:	Light Blue	Purple	Yellow	Green	Pink	Blue	Brown	Dark Green
Density Tolerance:	+ / - 10%							
Water absorption	< 1%							
Processing temperature:	176 °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® PVC

TEST STANDARDS		Units (Metric)	40	48	60	80	100	130	200	250
Density	ASTM D1622	Kg. / m ³	40	48	60	80	100	130	200	250
Compressive Strength	ASTM D1621-10	MPa	0,51	0,69	0,96	1,43	1,93	2,73	4,82	6,54
Compressive Modulus	ASTM D1621-10	MPa	28	33	0,46	68	90	125	208	277
Tensile Strength	ASTM D1623	MPa	0,74	0,95	2,11	2,60	3,08	3,81	6,45	7,11
Tensile Modulus	ASTM D1623	MPa	74	87	106	137	169	216	406	429
Shear Strength	ASTM C273	MPa	0,45	0,55	0,77	1,13	1,49	2,03	3,43	4,67
Shear Modulus	ASTM C273	MPa	13	16	21	29	37	49	76	96
Shear elongation at break	ASTM C273	%	5	9	13	20	25	32	41	40
Thermal conductivity at 24 °C	ASTM C-177	W/m.K	0,0031	0.031	0.031	0.033	0.035	0.039	0,048	0,056
Standard Sheet (Plain)	Length	mm	2850	2730	2450	2180	2050	1900	1600	1500
	Width	mm	1330	1270	1150	1020	950	850	750	700
	Thickness	mm	3 to 80	3 to 70	3 to 70	3 to 70	3 to 64	3 to 51	3 to 45	3 to 45

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

Color:	Light Blue	Purple	Yellow	Green	Pink	Blue	Brown	Dark Green
Density Tolerance:	+ / - 10%							
Water absorption	< 1%							
Processing temperature:	80 °C							

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