

carbon**zero**hpl

Compact X2

TECHNICAL DATA SHEET

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X² Compact

Composition

X² Compact is manufactured with high-tech polymers that give extreme durability, and chemical resistance for exterior use. The core or laminate holder comprise thin layers of Kraft paper saturated with phenolic resin, to be then assembled and subjected to a specific pressure of 100 Kg / cm² and 135 ° C (275 ° F). Once pressed, its cut in nominal dimensions, inspected, coated with protective film, packaged and shipped to our customers.

Recommended Uses

X² Compact laminate is available in 10, 12, 15 and 18 mm thicknesses with backer in our Cinder 2110. Its composition and cross-linking product of electron beam technology, allows it to have very high scratch, chemical and wear resistance. Its high performance against solar radiation makes it the perfect product for public and institutional furniture, work surfaces, café and restaurant tables tops, and for general use in decorative exterior horizontal application elements that are exposed to outdoor environments.

Advantages

- 100% thermo stable plastic, does not corrode
- Its inert behavior prevents mosses and lichens growth on surface
- Easy to clean and anti-graffiti composition minimizes soiling
- Its chemical composition and monolithic structure is not attacked by fungi, bacteria, pests, termites, etc.
- UV protection prevents discoloration due to sunlight exposure
- Protection against polymer oxidation or degradation
- Easy and safe to install
- High resistance to chemicals such as alkalis, acids and strong oxidizers
- Wide range of designs and colors available
- High impact and humidity resistance, and dimensional stability
- Exceptional high scratch resistance, higher than 6 Newton
- Good thermal and acoustic insulation
- Grade B fire retardant classification (NFPA 101 code)

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Useful Information

1. Conditioning and storing X² Compact is very important, it should be stored horizontally, at a regular temperature (max. 30°C 86°F) and relative humidity (max. 60%), in a dry and drafty place.
2. In the inside covering of car interiors X² Compact must be secured by using rivets and/or bevels. The back of the laminate shall be protected by acoustic tapes to prevent the noise produced by friction. Due to its compact composition, that provides air tightness and greater water resistance, Compact does not need additional protection such as sealers or asphalt products.
3. X² Compact should be cut with circular saws at a 8-12 m/min. and 3,000-5,500 r.p.m. speed, the tooth of the saw must be done in plane trapezoidal diamond with alternating geometry. For routed jobs, a cylindrical miller of minimum 12,000 r.p.m. must be used.
4. To perforate X² Compact use a tungsten-carbide drill bit with biangular end at 10,000 r.p.m. The selected drill bit must be 0.002 inches (0.05 mm.) bigger than the specific diameter of the hole to be made.
5. X² Compact is available in two finishes: Gloss and Matte. We recommend the use of textured laminates in horizontal surfaces as cafeteria tables, desks, kitchen counter tops, etc. To avoid damages on the laminate surface, a protection element as a wooden or ceramic piece must be used before doing any kind of cut labor over it. Also use a similar protector element on the laminates to put hot objects with temperature exceeding 135°C(275°F)
6. For stain cleaning or maintenance of X² Compact, use water, soft non-abrasive detergents and nylon brushes. Stubborn stains may require the use of hypochlorite bleach dissolved in water. Avoid the use of strong bleachers, organic detergents and abrasive brushes, these could discolor and scratch the surface. Grease stain should be cleaned with a soft cloth and organic solvent or a mixture of 50:50 alcohol-organic solvent, the laminate shall be free of stain without any deterioration of its color tone or its original design.
7. X² Compact provides a long-life surface and easy maintenance. They are not suited for laboratory surfaces, where corrosive material, alkalis and strong acids are used in its daily labor because their damage will be inevitable.

mechanical properties							
METHOD	PROPERTY	FIBER ORIENTATION	UNITS	2 - 6 mm7	NEMA LD.3 CGS	25 mm	NEMA LD.3 CGS
ASTM D 790	FLEXION RESISTANCE		PSI max.	41317	18000	30759	18000
		Transversal	PSI max.	39194	12000	28945	12000
ASTM D 790	FLEXION UNIT	Longitudinal	PSI max.	2.04 X 10 ⁶	1.6 x 10 ⁶	2.0 x 10 ⁶	1.6 x 10 ⁶
		Transversal	PSI max.	1.72 X 10 ⁶	1.4 x 10 ⁶	1.87 x 10 ⁶	1.4 x 10 ⁶
ASTM D 638	TENSION RESISTANCE	Longitudinal	PSI max.	20062	18000	25598	18000
		Transversal	PSI max.	17084	12000	24216	12000

Analysis Certificated #4227-729830

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warping specification								
PRODUCT IDENTIFICATION			HPL FOR STRUCTURAL APPLICATIONS (COMPACT) - GRADE 100					
TEST METHOD & STANDARD	QUALITY FEATURES	UNITS	Carbonzero	Nema LD.3	EN 438	Carbonzero	Nema LD.3	EN 438
	Reference standard							
	Nomenclature	—	2 - 6 mm C	CGS C	GS 6	- 25 mm	CGS	GS
			2.0 mm <= e < 3.0 mm		+/- 0.20 mm	12.0 mm <= e < 16.0 mm		+/- 0.60 mm
#3.1.5 Nema LD.3, #5 EN-438	THICKNESS	mm	3.0 mm <= e < 5.0 mm		+/- 0.30 mm	16 mm <= e < 20.0 mm		+/- 0.70 mm
			5.0 mm <= e < 8.0 mm		+/- 0.40 mm	20.0 mm <= e < 25.0 mm		+/- 0.80 mm
			8.0 mm <= e < 12.0 mm		+/- 0.50 mm			
#3.1.6 Nema LD.3, #9 EN-438	WARPING	mm/m maximum	2.0 <= e < 6.0 mm		8.0 mm/m Max			
			6.0 <= e < 10.0 mm		5.0 mm/m Max			
			10 mm <= e		3.0mm/m Max			

compact weight (kg)				
Nominal	1.220 x 2.440 m m	1.220 x 3.060 mm	1.530 x 2.440 mm	1.530 x 3.660 mm
Thickness (mm)	(4x8 ft)	(4x10 ft)	(5x8 ft)	(5x12 ft)
2.0	9	11	11	16
4.0	17	21	21	32
6.0	26	32	32	48
8.0	34	43	43	64
10.0	43	53	53	80
12.0	51	64	64	96
15.0	64	80	80	120
18.0	77	96	96	144
20.0	85	107	107	160
25.0	106	133	133	200

Limited Warranty

CarbonZero warrants that its products are reasonably free of defects, and when properly used, will comply with normal deviations to related manufacturing specifications. This warranty will be extended only to the original buyers for a period of ten (10) years from the purchase date. It excludes damage resulting from accidents, abuse or lack of care, improper use and/or any alteration. Since CarbonZero laminates have a wide range of applications, without the possibility of control over the manufacturing of the end product, CarbonZero does not assume obligations or liabilities arising from the furnishing, sale, installation or repair, use or subsequent sale of any product, to any person or entity. The contents of this brief correspond to common knowledge of High Pressure Laminates. CarbonZero offers this information solely to provide suggestions for your application. Since it's impossible to anticipate all variations in actual end use conditions, no warranties or liabilities can be assumed by CarbonZero in connection to the use of this information. CarbonZero believed the information and recommendations provided herein to be accurate at the time of preparation or obtained from sources believe to be generally reliable. CarbonZero can modify it without prior notice.