

carbonzero^{hpl}

Metals

TECHNICAL DATA SHEET

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Metals

Composition

The Metals are manufactured with aluminum sheets and Kraft paper saturated phenolic resin as support for the laminate. These materials combination is subjected to a high specific pressure (100 kg/cm²) and 135°C. Once the press cycle is finished, the laminate is trimmed following the established nominal dimensions and sanded to provide a greater adherence when the adhesive is applied over the wooden surface

Recommended Applications

The Metals of CarbonZero combines the advantages of our high pressure decorative laminates with the purity of aluminum. The Metals are designed for applications both vertical and horizontal, in light work places or interior spaces where a unique decorative touch is required, such as: restaurants, jewelry stores, hotel counters, boutiques, theaters, offices and department stores, among others.

Basic Limitations

The Metals are designed for interior uses only, it is not meant to be structural material; it does not admit high humidity or high temperature, exceeding 70°C (158°F). The Metals should not be exposed to intense and continue sunlight. The Metals should not be post-formed; it should only be used in normal or straight applications. Due to the low surface resistance typical of a ductile material such as aluminum, the Metals tend to get scratched; therefore we recommend its use only for light duty applications. The Metals are always commercialized with a protecting film, that should only be removed once the application is finished to prevent the surface deterioration during its manipulation. Take a look at our collection for a better selection of the approved designs such as Brushed, Dots, Squares, Vertical Lines, Horizontal Lines and Waves type. Please contact our sales representatives for further assistance.

product identification								
TYPE OF LAMINATE	GRADE	NOMINAL THICKNESS	SIZES				FINISHES	
		mm (inch)	feet (ft)				Brush	Matte
			4 x 8	4 x 10	5 x 8	5 x 12		
			meters(mt)					
1,22 x 2,44	1,22 x 3,06	1,53 x 2,44	1,53 x 3,66					
Horizontal Standard	70	1,20 (0,048)	X	-	-	-	X	X
Horizontal Standard	50	1,00 (0,039)	X	-	-	-	X	X
Vertical Standard	30	0,70 (0,028)	X	-	-	-	X	X

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Useful Information

1. Conditioning and storing conditions of the Metals are 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. For manual, low press applications of the Metals, use contact adhesive in a solvent/neoprene base. When it comes to industrial applications, we strongly recommend the use of PV A adhesive (Polyvinyl Acetate), it does not react with heat and also has a high humidity resistance. To get a good adherence, we suggest you to use 80-140 g/m² of adhesive and a 7-9 k/cm² pressure. In case of having any waste of adhesive in the laminate while finishing the application, remove it with a soft cloth and organic solvent or a mixture of 50:50 alcohol-organic solvents.
3. To avoid warping in the surface coated with CarbonZero High Pressure Metals, we recommend the use of backer laminate on the back side of the wooden surface.
4. The Metals should be cut with circular saws at a 8-2 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
5. To perforate Metals 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.
6. For stain cleaning or maintenance of the Metals, 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. The Metals offers a long lasting and an easy cleaning surface. For High Pressure applications we suggest you to ask for the Metals covered with protective film to prevent any scratch or stain on the surface of the laminate during transportation, handling and application - that can seriously affect erasing properties on the surface of the laminate.

technical specifications					
* NEMA LD.3/ EN-438 TEST METHOD	PROPERTY	UNITS	Grad 30	NEMA LD3 VGS	EN-438 VGS
	NOMINAL THICKNESS	In (mm.)	0.028 (0.70)	0.028 (0.70)	-
	THICKNESS TOLERANCE	In (mm.)	+/- 0.004 (+/- 0.10)	+/- 0.004 (+/- 0.10)	-
3.1 / 4.0	APPEARANCE	defects	No A,B,C defects	No A,B,C defects	-
	CLEANABILITY	rating (max.)	5	20	-
	STAIN RESISTANCE				
	Stain 1-10	effect	NE	NE	-
	Stain 11-15	effect	NE	M	-
3.4 / 26	Group 1	grade	5	-	5
	Group 2	grade	5	-	5
	Group 3	grade	5	-	4
3.5	BOILING WATER RESISTANCE	effect	NE	NE	-
3.6 / 16	HIGH TEMPERATURE RESISTANCE	grade (min.)	NA	NA	NA
	DIMENSIONAL CHANGE				
3.11 / 17	Longitudinal	% máx.	0.50	0.70	0.75
	Transversal	% máx.	0.80	1.2	1.25

SL=Slight Effect=4, NE=No Effect=5, M=Moderate=3, NA=Not Applicable, S=Standard
 * Nema LD.3 America and EN-438 Europe

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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 one (1) year 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 believed to be generally reliable. CarbonZero can modify it without prior notice.