DATASHEET - POLYCARBONATE MULTIWALL

1. PRODUCT DESCRIPTION

Bold multiwall panels are manufactured in extrusion process with 100% virgin polycarbonate resin, dyes and have a coextruded UV layer that acts against solar radiation, preventing accelerated aging. They are characterized by their high impact resistance, thermal insulation and high light transmission. Its ideal flexibility allows for precise cutting and cold curvature.

2. APPLICATION AND USES

BOLD multiwall panels are used as roofs in buildings and residences, sheds, horizontal and vertical closures, arenas, shopping malls, industrial centers or other residential applications that require lighting.

3. TECHNICAL INFORMATION

3.1 Types of panels

Double layer alveolar panels manufactured according to bold design.

3.2 Quantitative and qualitative characteristics:

a) UV protection

The alveolar panels contain a coextruded layer of protection against UV radiation, which allows to avoid loss of lighting and yellowing. Thanks to this, it has a 10-year warranty against loss of light transmission. All polycarbonate panels have traceability and tracking code printed on the face where there is no UV protection.

* Valor nominal

b) Light transmission

Taking advantage of natural light, they present an effective block age of infrared, significantly reduce energy costs and establish more comfortable indoor conditions. In addition, depending on the color, the transmission of light can be diffused, generating uniform illumination, thus avoiding areas of shadow or uncomfortable incandescent spots produced by the sun or lamps

c) Resistance to impacts and weather

They have high impact resistance and weather. Its impact resistance is 250 times higher than that of glass and 40 times higher than acrylic. Excellent protection against weather agents. Supports temperatures betwe en - 40 and 120 °C.

e) Thermal conductivity

The thermal conductivity of alveolar panels is significantly lower than that of other materials (Aluzinc, fiber cement, etc.). Its low thermal conductivity combined with its structure with air chambers in alveolar polycarbonate provides a prolonged thermal insulation, superior to non-alveolar glass and plastic panels.

f) Flexibility

Bold multiwall panels can be perfectly cold curved in the longitudinal direction. Bending radii vary between 750 and 1500 mm, depending on the thickness of the panel. The diversity of Bold alveolar panels makes them ideal for curved or flat applications. Its excellent resistance to deformation under load in adverse conditions allows it to remain stable without any significant deformations that impair the performance and presentation of the product.

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4. Physical/ Mechanical Properties

Properties	Unit	Test method	Thicknesses in millimeters			
			4	6	8	40
Impact resistance	J/m	ASTM D5628	790	810	890	970
Bending module	Mpa	ASTM D790	22,000			
Tensile strength	N/mm2	ASTM D638	640			
Flammability	Classificação	ASTM D-635	CC-1			
Thermal conductivity K	W/m2k	ISO 10077	4	4	3	3
Aging accelerated (QUV)	Anos	ASTM G154	10			
Sound proofing	dB	DIN 52210	15	17	18	19
Minimum radius of curvature	m	STD	0,750 1,000 1,250 1,500			
Dimension	m	STD	0,01			

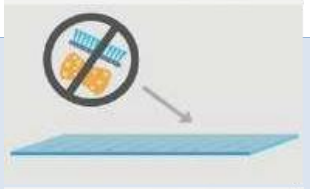
Lengths and widths: +/- 1 cm tolerance | The thickness of the plate may present variations of +/-5%.

5. Optical properties

Code	Colour	Coefficient (SC)(4)	Coefficient of Heat Gain (SHGC)(3)	Light transmission (LT)(2) ASTM D-1003%			
				4	6	8	10
K01TRANS	Transparent	0,86	0,75	80	80	79	79
K02BLHT	White	0,60	0,52	25	24	23	21
K06BRON	Bronze	0,57	0,50	19	19	18	18
K05GHO	Grey smoke	0,70	0,61	40	40	39	38
K07CELT	Light blue	0,54	0,62	20	20	19	19
K08AZUL	Blue	0,80	0,70	26	25	24	24
K09ANAJ	Orange	0,78	0,68	55	55	54	54
K10AMAR	Yellow	0,80	0,70	78	78	77	77
K11ROJO	Red	0,72	0,63	16	16	15	15
K12TURQ	Turquoise	0,71	0,62	52	52	54	54
EK01GRRF	Reflective grey	0,46	0,40	11	10	9	9
K13VERD	Green	0,68	0,59	30	30	29	29

*For other colors, please consult the manufacturer. (2) LT (Light Transmission): Percentage of incident visible light that passes through an object. (3) SHGC (Heat Gain Coefficient): Percentage of incident solar radiation transmitted by an object including direct solar transmission and the part that solar absorption radiates inside. (4) SC (Shadow Coefficient): Amount of heat from the sun transmitted through a window compared to a standard single panel glass window of 1/8 inch thick under the same conditions.

6. Cleaning and care

Description	Materials
Remove dust with a dry cloth, then wipe with a damp cloth and dry immediately with a cloth or flannel.	
Do not clean the plates in bright sunlight or very high temperatures. Also do not steam wash.	
Do not use abrasive or alkaline cleaning products, brushes, mops or sponges.	
Do not expose the plate to chemicals such as varsol, benzene, gasoline, thinner, water colors, acetone, carbon tetrachloride, muriatic acid or silicones not recommended for polycarbonates.	

7. Chemical resistance

Safe agents: acetic acid, 10% citric acid, 20% hydrochloric acid, hydrofluoric acid 5%, ethyl alcohol 95%, sulfur, butane, ammonia chloride, antimony and calcium, mercury, methane, carbon monoxide, ozone, urea.
With caution: formic and perchloric acid, sulfur dioxide, cyclohexane, diesel, glycerin, hydrosin e oil. **Unsafe agents:** Butyl amyl acetate, acetone, sulfuric acid, acrylonitrile, ammonia, benzine, bromine, chloroform, styrene, ether, methanol, PVC, iode.

8. Handling

It is recommended to store and protect external agent panels (sun, rain and hail) prior to installation. Polycarbonate alveolar panels should be handled with care. Avoid removing protective film to avoid scratches or perforations on the surface of the material and its edges.1

1 For more information on installation and handling, see the Installation Manual.