



klar®

POLYCARBONATE TWIN WALL SHEETS

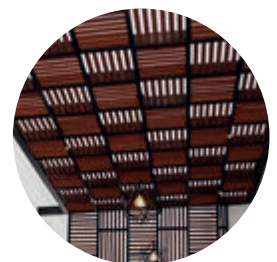
DATA SHEET

1. PRODUCT DESCRIPTION

Klar Polycarbonate Twin Wall sheets are manufactured in an extrusion process with 100% virgin resin, colorants and with UV co-extruded coating that acts against solar radiation and prevents it from accelerated aging. It is characterized by its great resistance to impacts, thermal isolation and high light transmission. Its optimal flexibility allows customized cuts and curving in cold.

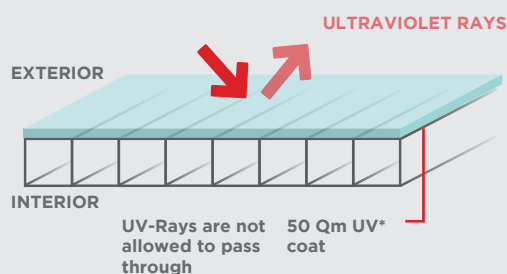
2. APPLICATIONS AND USES

Klar Polycarbonate twin wall sheets are used as covers in greenhouses, edifications and houses, storehouses, horizontal and vertical enclosures, coliseums, malls, industrial centers, and other residential applications that require natural illumination.



3. CHARACTERISTICS

UV Protection



The alveolar panels contain a co-extruded coating that acts as protection against UV radiation, avoiding losing illumination and yellowing. Thank to this, we offer a ten-year lifetime warranty against light transmission loss. Our sheets are traceable, come with a tracking code printed on the side where there is no UV protection.

Light Transmission



Klar Polycarbonate Twin Wall sheets allow you to take advantage of the natural light while effectively blocking infrared rays (IR), reducing energy costs and making inner conditions more comfortable ones. Besides, depending on the color selected, the light transmission may be diffused to obtain a uniform illumination, avoiding shadows or disturbing incandescent areas created by sun or light bulbs.

Resistance to impact and inclemency



It shows high resistance to impact and inclemency. Its impact resistance is 250 times higher than glass and 40 times higher to acrylic. Excellent protection against meteorological agents.

Self-extinguishable



Klar Polycarbonate twin wall sheets are considered by international standards as "self-extinguishable". It melts at very high temperatures without extending the flames nor producing incendiary drops. No toxic. They comply with the DIN 4102 standard for flammability, classified as Type B1.

Thermal conductivity



The thermal conductivity of the alveolar panels is significantly lesser than other materials (Aluzinc, fiber cement, etc.). Its low thermal conductivity along with its structure with air chambers of alveolar polycarbonate provides a lasting thermal isolation.

Flexibility



Klar Polycarbonate Twin Wall sheets may be perfectly curved in cold, in longitudinal direction. The curvature radius varies from 0.75 y 1.50 m as per the panel thickness. The diversity of our sheets makes them suitable for curved or flat applications.

4. KLAR PHYSICAL AND CHEMICAL PROPERTIES

Properties	Unit	Test Method	Width in mm			
			4	6	8	10
Resistance to impact	KJ/m ²	ASTM D5628	26	33	37	41
Module of flecion	KJ/m ²	ISO 178	2,400			
Module to traction	MPa	ISO 527	2400			
Tensile strength in performance	MPa	ISO 527	67			
K Thermal conductivity	W/m ² k	ISO 10077	4	4	3	3
Acoustic isolation	db	DIN 52210	15	18	18	19
Distance between supports	m	STD	0.40	0.60	0.80	1.00

5. CURVATURE RADIUS

Minimum cold curvature radius (m)	Unit
0.750	4mm
1.000	6mm
1.250	8mm
1.500	10mm



6. DIMENSIONES

Characteristics	Unit	Test Method	Tolerance
Length of the sheet	cm	STD	Value +/- 1
Width of the sheet	cm	STD	Value +/- 1
Thickness of the sheet	cm	STD	Value +/- 3%

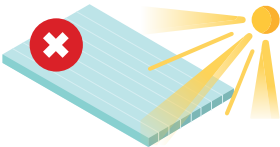
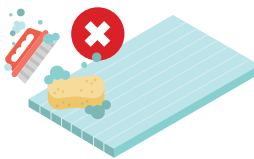
7. KLAR OPTICAL PROPERTIES

CODE	COLOR	Shadow Coefficient (SC)(4)	Solar Heat Gain Coefficient (SHGC)(3)	Light Transmission (LT) ⁽²⁾ ASTM D-1003%			
				4	6	8	10
K01TRANS	Clear	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	Smoke Grey	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	Cyan	0.71	0.62	52	52	51	51
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 with manufacturer

(2) LT (Light transmission): Percentage of incident visible light that passes through an object. (3) SHGC (Solar Heat Gain Coefficient): Percentage of solar radiation incident transmitted through an object that comprises a direct solar transmission and the part that solar radiation irradiates towards inside. (4) SC (Shadow coefficient): Amount of sun heat transmitted through a window compared to a standard single glass 1/8 inch-width window under the same conditions

8. CLEANING AND CARE

DESCRIPCIÓN	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 sheets under intense sunlight or at very high temperatures. Also, do not use steam cleaning.	
Do not use abrasive or alkaline cleaners, brushes, scouring pads, or sponges.	
Do not expose the sheet to chemicals such as Varsol, benzene, gasoline, thinner, turpentine, acetone, carbon tetrachloride, muriatic acid, or silicones not recommended for polycarbonates.	

9. CHEMICAL RESISTANCE

Klar Polycarbonate Twin Wall sheets exhibit good resistance to certain chemical reagents such as: 3% Hydrochloric Acid (HCl), 20% Sodium Hydroxide (NaOH), 5% Sulfuric Acid (H₂SO₄), Saturated Sodium Chloride Solution (NaCl), 50% Ethyl Alcohol, 3% Acetic Acid, and 3% Sodium Hydroxide.

10. HANDLING AND STORAGE

It is recommended to store and protect from external agents (sun, rain, and hail) prior to installation. The Polycarbonate Twin Wall sheets must be handled with care. Avoid removing the protective film to prevent scratches or perforations on the surface of the material and its edges. Remove the top film from the sheet once installation is complete to prevent adhesion.*

It is not recommended to roll sheets during storage or transportation, as this may result in permanent deformation of the sheets, as well as lifted edges and even broken cells.

Natural storage of the sheets should be conducted either vertically or horizontally.

*For more information on installation and handling, please refer to the Installation Manual.

11. NOTAS LEGALES

All technical data collected in this technical data sheet are based on laboratory tests. Current data measures may vary due to circumstances beyond our control. The information and in particular the recommendations on the installation and final use of Klar products are provided in good faith, based on the current Klar's knowledge and experience regarding its products, as long as these are properly stored, handled and transported; as well as installed under normal conditions. In practice, the differences in the materials, substrates and conditions of the work where the Klar products will be applied are so particular that from this information, from some written recommendation or from some technical advice, no guarantee can be deduced regarding the commercialization or adaptability of the product to a particular purpose, as well as no contractual liability. The property rights of third parties must be respected. All orders accepted by Klar are subject to Klar's General Contracting Clauses for the Sale of Products. Users should always refer to the latest edition of the Technical Data Sheet of the products; copies of which will be delivered at the request of the interested party or which can be accessed on the Internet through our website www.klar.us.com