

Exolon® UV

Solid polycarbonate sheet



Your benefits:

- excellent weathering resistance
- extreme impact strength
- good fire rating
- thermoformable

Exolon® UV sheets are made from clear-transparent polycarbonate sheets with UV protection on both sides. They are the perfect choice for a long service life owing to their good weathering resistance. These attributes are backed up by our 10-year guarantee on weathering resistance and a 10-year guarantee on retaining their mechanical properties.

Applications:

Exolon® UV is ideal for outdoor applications:

- covered walkways and bus shelters
- barrel vaults and skylights (also thermoformed)

Available sizes:

Exolon® UV is available in thicknesses of 2 – 15 mm and in the following sizes; other sizes, colors and sheet thicknesses on request.

Colors:

clear 2099	3,050 x 2,050 mm
white 2130	6,110 x 2,050 mm
white 2150	
bronze 2850	
grey 2760	
blue 2550	
green 2650	

Sizes (Standard):

	Test Conditions	Typical values ⁽¹⁾	Unit	Standard
PHYSICAL Density Water absorption saturation Water absorption equilibrium Refractive index	water at 23 °C 23 °C, 50% relative humidity Procedure A	1200 0.30 0.12 1.587	kg/m ³ % % –	ISO 1183-1 ISO 62 ISO 62 ISO 489
MECHANICAL Tensile modulus Yield stress Yield strain Strain at break Flexural modulus Flexural strength Charpy impact strength Charpy impact strength Izod impact strength	1 mm/min 50 mm/min 50 mm/min 50 mm/min 2 mm/min 2 mm/min 23 °C, unnotched 23 °C, 3 mm, notched 23 °C, 3.2 mm, notched	2350 > 60 6 120 2350 90 non-break 80P 70P	MPa MPa % % MPa MPa kJ/m ² kJ/m ² kJ/m ²	ISO 527-1,-2 ISO 527-1,-2 ISO 527-1,-2 ISO 527-1,-2 ISO 178 ISO 178 ISO 179-1eU ISO 179-1eA ISO 180-A
THERMAL Vicat softening temperature Thermal conductivity Coefficient of linear thermal expansion Temperature of deflection under load Temperature of deflection under load	50 N, 50°C/h 23°C 23 to 55°C 1.80 Mpa 0.45 Mpa	148 0.20 0.65 128 140	°C W/(m.K) 10 ⁻⁴ /K °C °C	ISO 306 ISO 8302 ISO 11359-1, -2 ISO 75-1, -2 ISO 75-1, -2
ELECTRICAL Electrical strength Volume resistivity Surface resistivity Relative permittivity Relative permittivity Dissipation factor Dissipation factor	1 mm 100 Hz 1 MHz 100 Hz 1 MHz	34 1E14 1E16 3.1 3.0 5 95	kV/mm Ohm.m Ohm – – 10 ⁻⁴ 10 ⁻⁴	IEC 60243-1 IEC 60093 IEC 60093 IEC 60250 IEC 60250 IEC 60250 IEC 60250

⁽¹⁾ These values are measured on injection molded samples, and are not intended for specification purposes.

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Exolon Group S-Line, the standard product line, represents a range of certified quality products which offer the reliable solution for most applications.

Light Transmission: Test Method according to DIN 5036.

The stated thicknesses are not all available as standard. Please ask us for more information. The stated values are typical values only.

Light transmission in %	2	3	4	5	6	8	10	12	15
Exolon® UV clear 2099	88	87	87	86	85	84	82	81	79
Exolon® UV white 2130	40	30	23	18	13				
Exolon® UV white 2150	60	50	40	33	28	20			
Exolon® UV bronze 2850	63	50	50	50	50	50	42	36	
Exolon® UV grey 2760		62	55	49	43	34	26		
Exolon® UV green 2650		77	73	71	68	62	60	56	
Exolon® UV blue 2550		61	55	51	46	40			

Fire Rating (*):

Country	Standard	Rating	Thickness	Color
UK	BS 476 Part 7 BS 476 Part 7	Class 1Y Class 1Y	2,3,4,6 & 12 mm 5 mm	clear 2099 white 2130
France	NF P 92-501&505	M2 M2	2 – 15 mm 3 – 12 mm	clear 2099 bronze 2850
Europe	EN 13501-1	B s1 d0 B s1 d0 B s2 d0	1 – 6 mm 1 – 3 mm 1 – 6 mm	clear 2099 white 2150 all colors, except 2150
USA	UL94	V2 HB VO	0.75 – 1.4 mm ≥ 1.5 mm ≥ 10 mm	all colors all colors clear 2099

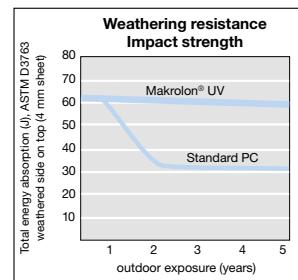
Glow wire flammability index, IEC 60695-2-12, in °C (*):

	2	3	4	5	6
Exolon® UV clear 2099	800		960		960
Exolon® UV bronze 2850		960	960		
Exolon® UV white 2130	960	960	960		
Exolon® UV white 2150	960	960	960	960	960

(*) Fire certificates could be limited in time and scope, always check if the mentioned certificate is valid for the purchased Polycarbonate sheet type at the date of delivery. Polycarbonate sheets may change their fire behavior due to ageing and weathering. The indicated fire rating was tested on new / unweathered Product in accordance with the indicated fire classification standards.

Weathering Resistance: Exolon® UV sheets show excellent weathering resistance, which guarantees their impact strength even after many years. Since their introduction in 1989, the sheets have been examined in an intensive test program, including a real-time outdoor exposure test in a southern European climate (Bandol). The sheets are provided with a 10-year warranty on unbreakability and on optical properties.

Permanent Service Temperature: The permanent service temperature without load is approx. 120 °C.



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