

Exolon® UV ECOplus

Solid polycarbonate sheet with bio-circular content



Your benefits:

- sustainable share up to 89% of the content
- excellent weathering resistance
- extreme impact strength
- good fire rating

Exolon® UV ECOplus8 sheets are clear-transparent polycarbonate sheets with UV protection on both sides which have an attributed sustainable share of up to 89% of the content. 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.

Exolon® UV ECOplus8 is a partially bio-circular grade, attributed via mass balance according to ISCC PLUS Standard. The attributed sustainable share amounts up to 89% of the total content, a.o. by replacing the fossil based raw material in the product with renewable content.

Applications:

- Exolon® UV ECOplus8** is ideal for outdoor applications:
- covered walkways and bus shelters
 - barrel vaults and skylights (also thermoformed)

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

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

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Exolon Group ECORANGE represents a line of products which attribute to improved sustainability by having a lower ecological footprint.

Light Transmission: Test Method according to DIN 5036.

The stated thicknesses are not 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 ECOplus8 clear 2099	88	87	87	86	85	84	82	81	79
Exolon® UV ECOplus8 white 2130	40	30	23	18	13				
Exolon® UV ECOplus8 white 2150	60	50	40	33	28	20			
Exolon® UV ECOplus8 bronze 2850	63	50	50	50	50	50	42	36	
Exolon® UV ECOplus8 grey 2760		62	55	49	43	34	26		

Available sizes: Exolon® UV ECOplus8 sheets are available on request in thicknesses of 2 – 15 mm and in the following sizes; other sizes, colors and sheet thicknesses on request.

Colors:

Exolon® UV ECOplus8 clear 2099

Sizes (standard):

3,050 x 2,050 mm

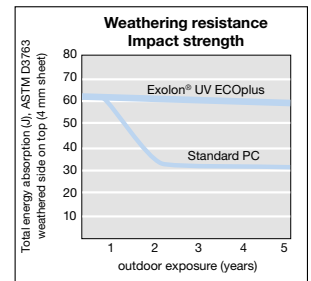
Fire Rating (*):

Country	Standard	Rating	Thickness	Color
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

(*) 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 ECOplus8 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.



Sustainability

The Exolon Group is committed to sustainability and protecting the environment, and actively supports and promotes developments which reduce the environmental impact of its products. **Exolon® UV ECOplus** is a partially bio-circular sheet with low carbon footprint. This means that the part of the material which is normally made from fossil raw materials is now made from renewable content. The attributed sustainable share amounts up to 89% of the total content. This is monitored via ISCC PLUS.



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