

Exolon® AR 5

Abrasion-resistant solid polycarbonate sheet



Your benefits:

- excellent impact strength
- good abrasion resistance
- good weathering resistance
- high clarity



Exolon® AR 5 sheet is an abrasion and UV resistant polycarbonate sheet that offers improved surface hardness coupled with the impact strength of standard polycarbonate. Additionally, **Exolon® AR 5** is available both sides coated, as well as one side coated.

Exolon® AR 5 has a 10-years warranty against breakage and 5-years warranty against delamination and weathering.

Applications:

Typical applications for **Exolon® AR 5** sheet include transparent separation screens and flat glazing systems. **Exolon® AR 5** is used in correctional and psychiatric facilities, as well as for view windows and machine guards in harsh chemical environments. Due to its scratch-resistant coating, **Exolon® AR 5** cannot be thermoformed like uncoated **Exolon®** sheets.

	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
Taber abrasion resistance	Δ haze after 100 cycles (500 g CS 10F) after 500 cycles	< 5 < 9	% %	ASTM D1044 & ANSI Z26.1
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

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

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Ideas, innovative, intelligent, interesting... Exolon Group i-line represents the next generation of quality products. This seal guarantees innovative and intelligent first-class solutions at all times for a multitude of requirements.

Light Transmission:

Test Method according to EN 410.

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
Exolon® AR 5 clear W099/ V099	88	88	87	87	86	85

Available sizes:

Exolon® AR 5 is available in thicknesses of 2 – 8 mm and in the following sizes; other sizes, colors and sheet thicknesses on request.

Colors:

Exolon® AR 5 clear W099 2-sides coated
Exolon® AR 5 clear V099 1-side coated

Sizes:

3,000 x 2,000 mm
3,000 x 2,000 mm

Permanent Service Temperature:

The permanent service temperature without load is approx. 120°C.

Exolon® AR 5 can be cold bended to a radius of 250 times the thickness



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