

Product data sheet, August 2021

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 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 Nominal strain at break Flexural modulus Flexural strength Taber abrasion resistance	1 mm/min 50 mm/min 50 mm/min 50 mm/min 50 mm/min 2 mm/min 2 mm/min 2 mm/min Δ haze after 100 cycles (500 g CS 10F) after 500 cycles	2350 > 60 6 > 50 2350 90 < 5 < 9	MPa MPa % % MPa MPa MPa %	ISO 527-1,-2 ISO 527-1,-2 ISO 527-1,-2 ISO 527-1,-2 ISO 178 ISO 178 ASTM D1044 & ANSI Z26.1
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

⁽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 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
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: Sizes:

 Exolon® AR 5 clear W099
 2-sides coated
 3,000 x 2,000 mm

 Exolon® AR 5 clear V099
 1-side coated
 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

