Product data sheet, November 2026

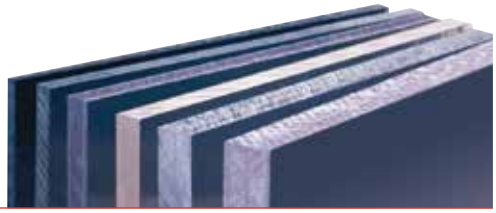
Exolon® FR AR

Fire retardant polycarbonate sheet with abrasion resistance

I Line
Innovative

Your benefits:

- extreme impact strength
- good abrasion resistance
- UL94-V0 classification
- excellent weathering resistance



Exolon® FR AR sheet is a fire retardant and abrasion resistant polycarbonate sheet that offers glasslike hardness coupled with the impact strength of standard polycarbonate. **Exolon® FR AR** sheets have excellent fire rating: they are UL94-V0 rated as of 3 mm thickness. Additionally, **Exolon® FR AR 8099** offers on both surfaces enhanced resistance against yellowing and hazing for an extended service life in high profile architectural glazing.

Exolon® FR AR has a 10-years warranty against breakage and 7-years warranty against delamination and weathering.

Typical applications for Exolon® FR AR sheet include:

- lighting fixtures and electro technical components and guards which have to comply with UL94 requirements and require improved resistance to scratches and abrasion.
- any application where improved fire behaviour in combination with scratch resistance is needed for fire safe solutions

Due to its scratch-resistant coating, **Exolon® FR AR** cannot be formed like other **Exolon®** sheets.

	Test Conditions	Typical values[1]	Unit	Standard
PHYSICAL				
Density		1200	kg/m³	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)	1 – 4	%	ASTM D1044 &
	after 500 cycles	4 – 9	%	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 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
Exolon® FR AR clear 8099	88	88	86	85	84

Available sizes:
Exolon® FR AR is available in thicknesses of 2 – 10 mm and in the following sizes; other sizes, colors and sheet thicknesses on request.

Colors:
Exolon® FR AR clear 8099

Sizes:
3,000 x 2,000 mm

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

Fire Rating:

Country	Standard	Rating	Thickness	Colour
USA	UL 94	V0	≥ 3 mm	clear 8099

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