



SAPHIR® FLEX

SAPHIR® is our range of polycarbonate coated sheet.

SAPHIR® FLEX is a polycarbonate sheet with a unique flexible hard coating for curved applications.

SAPHIR® FLEX is a hard-coated polycarbonate sheet, glass like in appearance. The high impact strength of polycarbonate is combined with a flexible coating for cold curved applications, improved weatherability and chemical resistance and good protection against abrasion.

SAPHIR® FLEX is resistant to many of the most common chemicals

SAPHIR® FLEX can be cold formed and allows the end user to use the sheets in moderately curved applications.

ALSO AVAILABLE:

1 side coating, any colour or tint.

SAPHIR® FLEX BENEFITS:

- Flexible Hard Coating
- Abrasion and Impact Resistant
- UV Stability
- Chemical resistance
- More than 10 times the impact strength of high impact PMMA

APPLICATION AREAS:

Moderately curved applications, Anti-vandal glazing, security glazing, safety screens and acoustic screens, Industrial equipment (machine coverings, machine protections)

DELIVERY PROGRAM:

Standard size: 2000 x 3000 mm

Thickness range: 2 – 12 mm

1 side or 2 sides coated

Special sizes and thicknesses on request

SAPHIR® FLEX TYPICAL PROPERTY VALUES

Property	Value	Unit	Standard
Physical properties			
Density	1,2	g/cm ³	ISO 1183
Refractive index (20 °C)	1,586		ISO 489
Moisture absorption 24 h, 23 °C, 50% RH	0,15	%	ISO 62
Mechanical properties			
Tensile strength at yield (at break)	60 (70)	N/mm ²	ISO 527
Elongation at yield (at break)	6 (110)	%	ISO 527
Elastic modulus	>2300	N/mm ²	ISO 527
Flexural modulus	>2300	N/mm ²	ISO 178
Charpy unnotched impact strength -40 °C	NB	kJ/m ²	ISO 179/1eU
Charpy notched impact strength -30 °C	11	kJ/m ²	ISO 179/1eA
Izod notched impact strength +23 °C	65	kJ/m ²	ISO 180/1A
Izod notched impact strength -30 °C	10	kJ/m ²	ISO 180/1A
Thermal properties			
Coefficient of linear thermal expansion (20-70 °C)	65x10 ⁻⁶	K ⁻¹	ISO 11359-2
Thermal conductivity	0,20	W/m.K	ISO 8302
Coating properties			
Adhesion	GT-0		ISO 1044
Taber Abrasion ¹ CS 10F, 500g, 100 / 500 cycles	4 / <12	% Haze	ASTM D 1044

¹Taberhaze: Taber abrader, 500g load, CS 10F wheels, 100 cycles

Sheet Thickness	Bending Radius	Unit	Forming
2 mm	350	mm	Cold forming
3 mm	525	mm	Cold forming
4 mm	700	mm	Cold forming
5 mm	875	mm	Cold forming
6 mm	1050	mm	Cold forming
8 mm	1400	mm	Cold forming
10 mm	1750	mm	Cold forming
12 mm	2100	mm	Cold forming

Properties reported here are typical values for polycarbonate. Arla Plast makes no representation that the material in any particular shipment will conform exactly to the values given. The above information is based upon experience and given in good faith. Due to many factors which are outside our knowledge and control, no warranty is given or is to be implied with respect to such information. Detailed product specification and technical manual/information is available on request.