SAPHIR®

SAPHIR® is a hard coated polycarbonate sheet with glass like appearance suitable for flat applications. The high impact strength of polycarbonate is combined with improved weather and chemical resistance. The product offers protection against abrasion compared to standard plastic sheets.

SAPHIR® is resistant to many of the most common chemicals, and the hard coat also provides an excellent protection against graffiti and vandalism.

SAPHIR® weighs about half of standard glass, yet the product is virtually unbreakable. SAPHIR® has an outstanding clarity, the hard coat improves the light transmission of the polycarbonate sheet.

ALSO AVAILABLE:
Double side coating, one side coating, any transparent colour or tint.

Excellent fire performance complying requirements to EN 13501-1 (European fire classification for building and construction). In case of fire, the sheet will melt and allow venting where heat and smoke will be let out and therefore reduce the growth of fire by flame spread.

SAPHIR® BENEFITS:

- Abrasion and Impact Resistant
- Chemical Resistance
- UV Stability
- High optical quality and outstanding clarity
- More than 10 times the impact strength of high impact PMMA

APPLICATION AREAS:

Anti-vandal glazing, security glazing, safety screens and acoustic screens, Industrial equipment (machine coverings, machine protections), Indoor and outdoor signs, vending machine faces and many kinds of technical parts.

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® 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		DIN 53151 / ISO 2409
Taber Abrasion, CS 10F, 500g, 100 / 500 cycles	2 / <9	% Haze	ASTM D1044

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.

Arla Plast AB · Västanåvägen · SE 591 75 Borensberg · Sweden
Phone +46 141 20 38 00 · Fax +46 141 414 30 · E-mail: info@arlaplast.com · www.arlaplast.com

arla
www.arlaplast.com