



# SAPHIR HCE

SAPHIR HCE is an extruded polycarbonate sheet with coating for barrier protection application products for indoor use.

SAPHIR HCE is glass like in appearance. The high impact strength of polycarbonate is combined with a coating with improved chemical and abrasion resistance.

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

**GOOD FIRE PERFORMANCE** complying requirements to EN 13501-1 (EUROPEAN BUILDING STD). 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 HCE BENEFITS:

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

## APPLICATION AREAS:

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Moderately curved applications, Sneeze guards, Desk barriers, Restaurant shielding, Checkout lines.

Various barrier and screen projects to separate and protect people to avoid infections.

## DELIVERY PROGRAM:

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Standard size: 2000 x 3000 mm

Thickness range: 2 – 6 mm

2 sides coated.

Special sizes and thicknesses on request

## SAPHIR HCE TECHNICAL SPECIFICATIONS

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

Sheet Thickness	Bending Radius	Unit	Forming
2 mm	300	mm	Cold forming
3 mm	450	mm	Cold forming
4 mm	600	mm	Cold forming
5 mm	750	mm	Cold forming
6 mm	900	mm	Cold forming

Properties reported here are typical values. 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.