



# SAPHIR<sup>®</sup> FC

SAPHIR<sup>®</sup> is our range of polycarbonate coated sheet.

SAPHIR<sup>®</sup> FC, Formable Coating, polycarbonate sheet with a unique heat formable coating for curved applications.

SAPHIR<sup>®</sup> FC is a coated polycarbonate sheet, glass like in appearance. The high impact strength of polycarbonate is combined with a flexible heat formable coating for curved applications, improved chemical resistance and good protection against abrasion.

SAPHIR<sup>®</sup> FC can be heat formed and is suitable for curved applications.

SAPHIR<sup>®</sup> FC, is produced to fulfill the EN 166. Standard for visor products.

#### **ALSO AVAILABLE:**

One side coating, Anti-fog coating on one side, any transparent colour.

#### **SAPHIR<sup>®</sup> FC BENEFITS:**

- Heat forming / Drape forming properties
- Abrasion and Chemical resistant
- High heat resistance and dimensional stability
- More than 10 times the impact strength of high impact Acrylic

#### **APPLICATION AREAS:**

Curved applications, Visors for motorcycle, industrial visors and goggles, police helmet visors and multiple indoor and non-permanent outdoor applications.

#### **DELIVERY PROGRAM:**

Maximum size: 2000x3000 mm

Thickness range: 1 – 6 mm

1 side or 2 side coated

Special sizes and thicknesses on request

## SAPHIR® FC 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	DIN 8302
<b>Coating properties</b>			
Adhesion	GT-0		ISO 1044
Taber Abrasion <sup>1</sup> CS 10F, 500g, 100 cycles	<9	% Haze	ASTM D 1044
<sup>1</sup> Taberhaze: Taber abrader, 500g load, CS 10F wheels, 100 cycles			

Thickness	Bending radius	Unit	Forming
1 – 3 mm	120	mm	Cold / Drape forming
>3 – 6 mm	140	mm	Cold / Drape 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.