



# POLYCARBONATE SAPHIR<sup>®</sup> AF

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

POLYCARBONATE SAPHIR<sup>®</sup> AF is an anti-fog coated polycarbonate sheet. The high impact strength of polycarbonate is combined with effective protection against water vapor condensation and clear visibility for numerous applications.

POLYCARBONATE SAPHIR<sup>®</sup> AF weighs about half of standard glass, yet the product is virtually unbreakable.

#### ALSO AVAILABLE:

2-side AF coating, 1-side AF coating, 1-side scratch resistant coating /1-side AF coating, any colour or tint.

#### POLYCARBONATE SAPHIR<sup>®</sup> AF BENEFITS:

- Protection against water vapor condensation
- High optical quality and outstanding clarity
- Impact Resistant
- More than 10 times the impact strength of high impact PMMA

#### APPLICATION AREAS:

Applications where protection against water vapor condensation is needed such as visors for motorcycle, industrial visors and goggles, police helmet visors and multiple other applications.

#### DELIVERY PROGRAM:

Standard size: 2000 x 3000 mm

(<2 mm: 1250x2000 mm)

Thickness range: 1 – 6 mm

1 side or 2 sides coated

Special sizes and thicknesses on request.

## POLYCARBONATE SAPHIR® AF TYPICAL PROPERTY VALUES

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 h, 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>			
Coefficient of linear 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		DIN 53151 / ISO 2409
Taber Abrasion**, CS 10F, 500g, 100 cycles	<10	% Haze	ASTM D1044
Anti-fog effect***	>60	Sec	Internal test method

\*Based on raw material data

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

\*\*\*Anti-fog effect: Fogging time over water bath with 50°C water temperature.

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.