



MAKROCLEAR™ HARDCOAT

MAKROCLEAR™ HARDCOAT is a hard coated polycarbonate transparent sheet for flat applications. The high impact strength of polycarbonate is combined with a hard coating for flat applications, improved weatherability and chemical resistance and good protection against abrasion.

MAKROCLEAR™ HARDCOAT has medium optical quality and is the choice when chemical resistance, scratch resistance and impact strength are more important than high optical clarity.

MAKROCLEAR™ HARDCOAT is resistant to many of the most common chemicals, and the hard coat also provides an excellent protection against vandalism as paint and ink does not stick to the coated surface.

ALSO AVAILABLE:

Double side coating, one side coating, any transparent colour.

MAKROCLEAR™ HARDCOAT BENEFITS:

- Abrasion and Impact Resistant
- UV Stability
- Chemical resistance
- More than 10 times the impact strength of high impact acrylic

APPLICATION AREAS:

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

DELIVERY PROGRAM:

Standard size: 2000 x 3000 mm

Thickness range: 3 – 20 mm

1 side or 2 sides coated

Special sizes and thicknesses on request.

MAKROCLEAR™ HARDCOAT TECHNICAL SPECIFICATIONS

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 hours, 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	DIN 8302
Coating properties			
Adhesion	GT-0		ISO 1044
Taber Abrasion, CS 10F, 500g, 500 cycles	<12	% Haze	ASTM D 1044
¹ Taberhaze: Taber abrader, 500g load, CS 10F wheels, 500 cycles			

*Based on raw material data

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.