



# MULTICLEAR® 5X

**MULTICLEAR® 5X** is a range of extruded multiwall polycarbonate sheet specifically designed to offer increased stiffness, resulting in cost savings by reducing the number of glazing bars required and thereby increasing light transmission.

MULTICLEAR® 5X is a transparent and translucent sheet with one or two sides UV protection. Standard production is available in thicknesses 10, 16, 20 and 25 mm in clear, opal and bronze. Other colours are available on request.

MULTICLEAR® 5X has a 10-year limited warranty against discolouration, loss of impact strength and light transmission due to weathering. Manufactured under controlled production conditions to ensure consistent product quality.

#### Fire performance:

Classified B-s1, d0 according to EN 13501-1. The material is suitable for applications where reaction to fire classification is required.

#### ALSO AVAILABLE:

MULTICLEAR® HAMMER FINISH  
 MULTICLEAR® SOLAR CONTROL  
 MULTICLEAR® RPC  
 MULTICLEAR® ULTRA

#### MULTICLEAR® 5X BENEFITS:

- High light transmission
- Outstanding bending radius
- Cross structure offering greater stiffness
- Good thermal insulation

#### APPLICATION AREAS:

**Building industry** – roofing, cladding, sidewalls, conservatories, domes, skylights, sheds, car ports, smoke vents, swimming pool covers, suspended ceilings, glasshouses, shopping center roofing, railway/metro station, stadia roofing and partitions.

**Agriculture** – greenhouses, lorry/tractor ports and farm/barn buildings.

**Packaging** – boxes for lamp optics, neon signs, pallet shields and protective covers for fragile items.

**Advertising** – illuminated signs and panels.

## MULTICLEAR® 5X – technical specification

Multiclear® 5X	Thickness [mm]	Rib distance [mm]	Mass per unit area [g/m <sup>2</sup> ]	U-value [W/(m <sup>2</sup> ·K)]	Standard Width [mm]	UV protection	Standard colours
	10	10	1500 – 1700	2.5	2100 / 1250 / 1200 / 980	1-sided (2-sided optional)	Clear / Opal / Bronze
	16	10	2400 – 2700	2.0	2100 / 1250 / 1200 / 980	1-sided (2-sided optional)	Clear / Opal / Bronze
	20	10	2800 – 3000	1.8	2100 / 1250 / 1200 / 980	1-sided (2-sided optional)	Clear / Opal / Bronze
	25	10	3200 – 3500	1.6	2100 / 1250 / 1200 / 980	1-sided (2-sided optional)	Clear / Opal / Bronze

U-values calculated according to EN 673 (vertical heat flow).

## Polycarbonate material properties

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)	63 (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 (23–80 °C)	65x10 <sup>-6</sup>	K <sup>-1</sup>	ISO 11359-2
Heat deflection temperature, HDT A (1,80 N/mm <sup>2</sup> )	132	°C	ISO 75
Heat deflection temperature, HDT B (0,45 N/mm <sup>2</sup> )	142	°C	ISO 75
Vicat temperature VST/B 120	149	°C	ISO 306
Vicat temperature VST/B 50	148	°C	ISO 306
Thermal conductivity	0,20	W/m·K	ISO 8302

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.