



COLORADO[®] LED

COLORADO[®] LED offers a range of extruded translucent coloured polycarbonate. The product is produced with vast knowledge of our production team experienced in producing mono, co and tri-extrusion. The product is virtually unbreakable with extremely high impact resistance and offers high temperature performance too.

Arla Plast AB offer a range of LED colours with diffusing properties. The product can be created with a UV protection layer guaranteed against UV radiation and yellowing hence excellent for outdoor applications

COLORADO[®] LED provides designers, specifiers and architects with possibilities to use the LED coloured polycarbonate sheets in various applications with demands of diffusing effects and good light spreading.

STANDARD COLOURS:

Opal DB and Opal White.

Colour matching service on request.

ALSO AVAILABLE:

COLORADO[®] LED UV and our textured surfaces.

EXCELLENT 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.

COLORADO[®] LED BENEFITS:

- Excellent light spreading and hiding of the light source
- LED colours for homogenous light diffusion
- More than 10 times the impact strength of high impact acrylic
- Easy to cold bend or thermoform into complex shapes

APPLICATION AREAS:

LED applications, lamp covers, signs, displays and in other applications where a high impact strength and good light spreading and diffusion are needed.

DELIVERY PROGRAM:

Standard size: 2050 x 3050 mm

Opal LED colours: 2 - 4 mm

Colour: Opal DB, Opal White.

Customer specific colours upon request.

Embossing: Smooth, ICE[™], TEX[™], ANTI-REFLEX[™]

Special size and thickness on request.

COLORADO® LED TECHNICAL SPECIFICATIONS

Property	Value	Unit	Standard
Physical properties			
Density	1,2	g/cm ³	ISO 1183
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
Heat deflection temperature, HDT A (1,80 N/mm ²)	132	°C	ISO 75
Heat deflection temperature, HDT B (0,45 N/mm ²)	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	DIN 8302
Electrical properties			
Volume resistivity, dry	>10 ¹⁴	Ω . m	IEC 60093
Surface resistivity, dry	10 ¹⁶	Ω	IEC 60093
Dielectric strength, dry	30	kV/mm	IEC 60243
Dielectric constant, dry 50 Hz	3		IEC 60250
Dielectric constant, dry 1 MHz	2,9		IEC 60250
Dissipation factor (tan δ), dry 50 Hz	0,001		IEC 60250
Dissipation factor (tan δ), dry 1 MHz	0,01		IEC 60250
Light transmittance, Lt			
3 mm Opal DB	70	%	ASTM D1003
3 mm Opal White	48	%	ASTM D1003

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.