PRODUCT DATA SHEET (REV20250527)

PC / POLYCARBONATE **COLOURED TRANSLUCENT LED** SHEET

Light-Diffusing Polycarbonate for Homogeneous LED Illumination and Impact-Resistant Design.

SRT Plastics supplies Polycarbonate Coloured Translucent LED sheets - engineered for efficient light diffusion, visual consistency, and modern lighting design. These impact-resistant sheets offer optimal light spreading and help conceal light sources, making them ideal for LED applications.

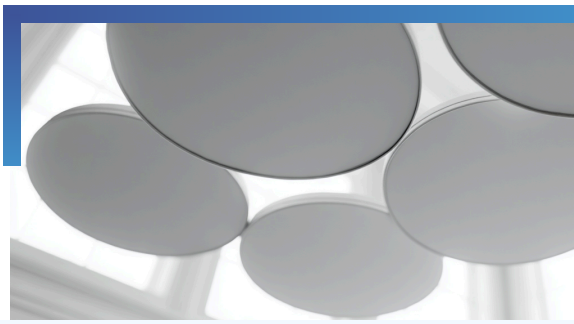
Available in standard Opal White and Opal DB colours, or custom-matched on request, this product enables designers and fabricators to create illuminated structures with clean aesthetics and excellent durability.

KEY ADVANTAGES

- High light diffusion with excellent hiding power for LED points
- Uniform lighting effect with minimal hot spots
- Over 10× stronger than high-impact acrylic
- Lightweight and easy to fabricate, cold-bend, or thermoform
- Fire-rated according to EN 13501-1 for construction safety
- Available in standard and custom LED-specific tints

TYPICAL APPLICATIONS

- LED backlit signage and illuminated displays
- Decorative and architectural lighting panels
- Diffuser covers for indoor and outdoor lamps
- Retail shelving and point-of-sale lighting enclosures
- Safety-critical lighting in public transport environments
- Lighting strips, luminaires, and ceiling installations



AVAILABLE DIMENSIONS

- Standard Sheet Sizes: 2050 x 3050 mm
- Thickness Range: 2 mm to 4 mm
- Colours: Opal DB and Opal White
- Custom sizes, textures, and thicknesses available upon request.

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PROPERTY	VALUE	UNIT	STANDARD
PHYSICAL PROPERTIES			
Density	1,2	g/cm³	IS0 1183
Refractive index (20°C)	1.586	-	ISO 489
Moisture Absorption (24h, 23°C, 50% RH)	0.15	%	ISO 62
MECHANICAL PROPERTIES			
Tensile Strength (Yield / Break)	60 / 70	N/mm²	ISO 527
Elongation (Yield / Break)	6 / 110	%	ISO 527
Elastic Modulus	>2300	N/mm²	ISO 527
Flexural Modulus	>2300	N/mm²	ISO 178
Impact Strength (charpy unnotched, -40°C)	NB	kJ/m²	ISO 179
Impact Strength (charpy notched, -30°C)	11	kJ/m²	ISO 179
Izod Notched Impact (+23°C / -30°C)	65 / 10	kJ/m²	ISO 180
THERMAL PROPERTIES			
Heat Deflection Temp (HDT A - 1.80 Nmm²)	132	°C	ISO 75
Heat Deflection Temp (HDT B - 0.45 Nmm²)	142	°C	ISO 75
Vicat Softening Temp (VST - B120 / B50)	149 / 148 °C	°C I	SO 306
Thermal Conductivity	0.20	W/m-K	ISO 8302
Linear Thermal Expansion (20°C - 70°C)	$65x10^{-6}$	K^{-1}	ISO 11359-2
ELECTRICAL PROPERTIES			
Volume Resistivity (Dry)	$>10^{14}$	Ω.m	IEC 62631
Surface Resistivity (Dry)	10^{16}	Ω	IEC 62631
Dielectric Strength (Dry)	30	kV/mm	IEC 60243
Dielectric Constant (Dry, 50Hz)	3		IEC 62631
Dielectric Constant (Dry 1MHz)	2.9		IEC 62631
Dissapation Factor (tan δ) (Dry 50Hz)	0.001		IEC 62631
Dissapation Factor (tan δ) (Dry 1MHz)	0.01		IEC 62631
LIGHT TRANSMITTANCE (Lt)			
3mm Opal DB	70	%	ASTM D1003
3mm Opal White	48	%	ASTM D1003