PRODUCT DATA SHEET (REV20250527)

PC / POLYCARBONATE **CLEAR TRANSPARENT FR** SHEET

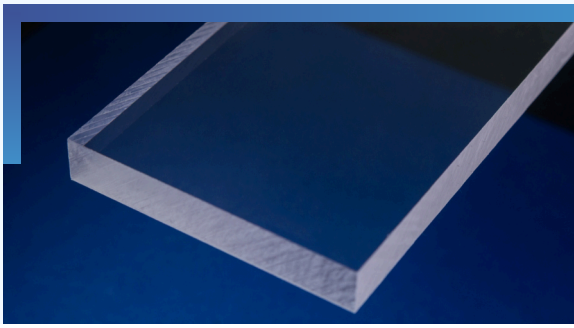
Flame Retardant Transparent Polycarbonate for Safety Critical Applications.

SRT Plastics offers Polycarbonate Clear Transparent FR, a flame-retardant solid polycarbonate sheet designed for projects where fire safety, optical clarity, and impact resistance must go hand in hand.

Engineered to meet the stringent UL 94 V0 fire classification from just 3 mm thickness, this material provides reliable protection in environments with elevated fire risk. It also delivers outstanding clarity, strength, and ease of fabrication, making it an ideal solution for glazing and protective installations in public and regulated spaces.

KEY ADVANTAGES

- Flame-retardant: UL 94 V0 rating from 3 mm thickness
- Excellent optical clarity and surface quality
- Extremely high impact resistance for demanding environments
- Lightweight - approximately half the weight of glass
- Easy to cut, shape, and thermoform
- Allows venting in case of fire, reducing flame spread



TYPICAL APPLICATIONS

- Glazing in transportation and public infrastructure
- Transparent protective barriers in buildings requiring fire-rated materials
- Machine guards and enclosures in fire-sensitive areas
- Electrical cabinet viewing windows and switchgear protection
- Fire-retardant signage and display panels
- Transparent elements in construction meeting fire safety codes

AVAILABLE DIMENSIONS

- Standard Sheet Sizes: 2050 x 3050 mm
- Thickness Range: 3 mm to 6 mm
- Colour: Clear
- Custom sizes, textures and thicknesses available upon request

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PROPERTY	VALUE	UNIT	STANDARD
FLAME RETARDANT SPECIAL PROPERTIES			
Limited Oxygen Index	35	%	ISO 4589
VO (on resin)	3	Mm	UL94
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	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