

Transparent thermoplastic with excellent clarity, UV stability, and weatherability. Available in cast, extruded, and impact-modified grades. Often used as a lightweight, shatter-resistant alternative to glass. Amorphous polymer with high optical quality.

STOCK AVAILABILITY

Plastic-Craft maintains extensive inventory across a wide range of standard and specialty sizes in sheets, rods, tubes, and custom profiles. Most orders ship from stock — contact us for immediate availability.

KEY HIGHLIGHTS

- 92% light transmission
- Half the weight of glass
- 17× impact resistance vs glass
- Excellent UV resistance
- Easy to fabricate & thermoform

COMMON APPLICATIONS

- Displays & signage
- Skylights & glazing
- Medical devices
- Aquariums & enclosures
- Lighting & lenses
- Point-of-purchase
- Machine guards

GRADES AVAILABLE

- Clear cast
- Clear extruded
- Colors & tints
- Impact-modified
- UV-filtering

MATERIAL PROPERTIES — TYPICAL VALUES

PROPERTY	ASTM	TYPICAL VALUE	UNITS
PHYSICAL			
Specific Gravity	D792	1.19	—
Water Absorption, 24h	D570	0.2	%
Melt Flow Rate	D1238	1.0 – 8.0	g/10 min
MECHANICAL			
Tensile Strength, Yield	D638	10,500	psi (72 MPa)
Tensile Modulus	D638	450,000	psi (3,100 MPa)
Elongation at Break	D638	4.0 – 6.0	%
Flexural Strength	D790	16,000	psi (110 MPa)
Flexural Modulus	D790	475,000	psi (3,300 MPa)
Compressive Strength	D695	17,000	psi (117 MPa)
Impact, Izod Notched	D256	0.4	ft-lb/in (21 J/m)
Rockwell Hardness	D785	M95	Scale M
OPTICAL			
Light Transmission	D1003	92	%
Haze	D1003	< 1	%
Refractive Index	D542	1.49	—
UV Transmission (320nm)	E903	0	%
THERMAL			
Heat Deflection @ 264 psi	D648	200	°F (93°C)
Heat Deflection @ 66 psi	D648	220	°F (104°C)
Vicat Softening Temp.	D1525	225	°F (107°C)
CTE (Linear)	D696	3.9 × 10 ⁻⁵ &sup5;	in/in/°F
Thermal Conductivity	C177	1.3	BTU·in/hr·ft²·°F
Max Continuous Service	—	180	°F (82°C)
ELECTRICAL			
Volume Resistivity	D257	> 10 ¹⁵	ohm·cm
Surface Resistivity	D257	> 10 ¹⁴	ohm/sq
Dielectric Strength	D149	500	V/mil (20 kV/mm)
Dielectric Constant, 60Hz	D150	3.5	—
FLAMMABILITY			
Horizontal Burn Rate	D635	1.1	in/min (28 mm/min)
UL Flammability Rating	UL 94	HB	—
Smoke Density (Ds at 4 min)	E662	> 450	—
DURABILITY			
Abrasion Resistance (Taber)	D1044	11 – 15	mg/1000 cycles
Weathering / UV	G154	Excellent	10+ yr outdoor

PROCESSING / FABRICATION NOTES: Easily machined & thermoformed (325–380°F) | Solvent bonded: Weld-On® 3, 4, 16 | Excellent laser cutting & flame polishing | Anneal after machining to relieve stress

CHEMICAL RESISTANCE: Resistant to dilute acids, alkalis, aliphatic hydrocarbons, oils & greases. **AVOID:** ketones (acetone), esters, aromatic & chlorinated solvents, alcohols (can cause stress crazing).

Typical values; not to be used as specifications. Actual values may vary by grade, manufacturer, and processing conditions. Contact Plastic-Craft for grade-specific data.