



Moriah Plastics – PMMA (Acrylic) Material Specification Sheet

Moriah Plastics

Custom Perspex® Display Stands | Johannesburg | SA-wide delivery[cite:28][cite:21]

Product description

Poly(methyl methacrylate) (PMMA), commonly called acrylic, is a rigid transparent thermoplastic used widely in retail displays, signage, covers, guards and point-of-sale fixtures.[cite:7][cite:15]

Clear PMMA is valued for high light transmission, good weather resistance and a clean premium finish suited to branded fabrication work.[cite:7][cite:15]

Common acrylic brands

Common acrylic brand names in the market include Perspex®, Plexiglas®, Acrylite® and Lucite®.[cite:15][cite:13] Brand availability depends on supplier, region, sheet type and grade, so project specifications should reference the actual sheet supplied rather than only the trade name.[cite:7][cite:15]

Typical properties

Property	Unit	Typical value
Density	g/cm ³	1.18–1.20 [cite:7][cite:15]

Light transmission, clear 3 mm	%	~92 [cite:7][cite:15]
Refractive index	–	~1.49 [cite:7][cite:15]
Water absorption	%	~0.3 [cite:7][cite:15]
Tensile strength	MPa	~70–75 [cite:7][cite:13][cite:15]
Tensile modulus	MPa	~3000–3200 [cite:7][cite:13][cite:15]
Flexural strength	MPa	~120–125 [cite:7][cite:13]
Elongation at break	%	~4 [cite:7][cite:13]
Glass transition temperature	°C	~100–105 [cite:7][cite:13][cite:15]
Heat deflection temperature	°C	~95–100 [cite:7][cite:13]
Continuous service temperature	°C	Up to ~70 [cite:7][cite:15]
Thermal conductivity	W/m·K	~0.18–0.20 [cite:7][cite:13]
Volume resistivity	$\Omega\cdot\text{cm}$	10^{13} – 10^{15} [cite:7][cite:13][cite:15]
Flammability	UL 94	HB [cite:7][cite:15]

Fabrication and processing

PMMA can be laser cut, CNC routed, drilled, line bent, thermoformed, polished and solvent bonded, which makes it suitable for custom display stands and branded retail fixtures.[cite:20][cite:28][cite:7] For display manufacturing, commonly used thicknesses often fall in the 3 mm to 10 mm range, depending on span, load, stiffness and visual requirements.[cite:7][cite:15]

Chemical resistance and care

PMMA generally resists dilute acids, dilute bases, oils and greases, but it is vulnerable to ketones, esters, chlorinated solvents and some alcohols that may cause crazing or stress cracking.[cite:7][cite:13] Finished displays should be cleaned only with acrylic-safe cleaners and soft non-abrasive cloths to preserve transparency and gloss.[cite:7][cite:13]

Typical applications

- Countertop displays, brochure holders, product risers and tray systems.[cite:11][cite:19]
- Freestanding display units, campaign towers and branded floor stands.[cite:12][cite:23]
- Pharmacy, food and beverage, cosmetics and event displays.[cite:18][cite:19][cite:23]
- Protective screens, covers, guards and acrylic signage components.[cite:18][cite:28]

Disclaimer

All values shown are typical guidance values compiled from commonly used PMMA technical data sheets and may vary by grade, supplier, thickness and processing method.[cite:7][cite:13][cite:15] Final project specifications should be confirmed against the selected supplier technical data sheet for the exact acrylic sheet used.[cite:7][cite:15]

References

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2. Nordon, Inc. *PMMA Polymethylmethacrylate (Acrylic)*. [cite:13]
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10. Moriah Plastics. *Services and Capabilities / Company Profile*. [cite:20]
11. Moriah Plastics. *Displays for Promotional Events*. [cite:23]