

Performance Plastic Sheets Material Comparison

Source: [American Made Performance Plastic Sheets](#)

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Comprehensive comparison of plastic sheet materials including temperature ranges, chemical resistance, and FDA compliance options.

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Material Type	Temperature Range	Chemical Resistance	Impact Strength	Primary Applications	FDA Compliant Options
UHMW-PE	Cryogenic to 180°F	Excellent (pH 2-12)	Exceptional	Wear surfaces, conveyor components, cutting boards	Yes (virgin grades)
HDPE	-60°F to 180°F	Excellent (most chemicals)	Very Good	Tanks, outdoor structures, marine components	Yes (natural color)
Polypropylene	-20°F to 180°F	Outstanding (acids/bases)	Good to Excellent	Chemical equipment, laboratory hoods, fume ductwork	Yes (homopolymer)
Acrylic	-40°F to 160°F	Moderate (avoid solvents)	Moderate	Display cases, glazing, optical applications	Limited grades
Polycarbonate	-40°F to 280°F	Moderate (sensitive to bases)	Outstanding	Machine guards, safety shields, vandal-resistant glazing	Limited grades
Nylon	-60°F to 250°F	Good (oils, weak acids)	Excellent	Gears, bearings, structural components	Yes (type 6/6)

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