

PROTEUS®
Premium Black Polypropylene

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PHYSICAL PROPERTIES

This crystalline material is noted for its high strength-to-weight ratio, excellent chemical resistance and high performance in thermoforming and corrosive environments. Proteus® polypropylene (PP) also meets all food grade regulations and is very resistant to acid.

Property	Method	Unit	Nominal Value*
Density	ASTM D-792	g/cm ³	0.905
Tensile strength at yield	ASTM D-638	psi	5200
Tensile modulus	ASTM D-638	psi	n/a
Elongation at yield	ASTM D-638	%	12
Elongation at break	ASTM D-638	%	n/a
Tensile impact	DIN 53448	ft-lbs/in ²	269
Flexural modulus	ASTM D-790	psi	212,425
Flexural strength	ASTM D-790	psi	7250
Izod impact	ASTM D-4020	ft-lbs/in ²	1.2
IZOD impact notched	ASTM D-2240	ft-lbs/in ²	n/a
Compressive modulus	ASTM D-695	psi	n/a
Compressive deformation	ASTM D-621	% at 1000 psi	n/a
Melting point	ASTM D-3417	°F	329
Hardness	ASTM D-2240	Shore D	88
Coefficient of linear thermal expansion	ASTM D-696	in/in/°F	4.3 x 10 ⁻⁵
Heat deflection temperature, 66 psi	ASTM D-648	°F	210
Max. operating temp.		°F	180
Volume Resistivity	ASTM D-257	Ohm-cm	>10 ¹⁵
Surface Resistivity	ASTM D-257	Ohm	>10 ¹⁵
Water absorption 24hrs.	ASTM D-570	%	0.01

*All values are determined on specimens prepared according to ASTM 1248-84 "Standard Specifications for Polyethylene Plastic Molding and Extrusion Materials". Nominal values should not be interpreted as specifications.

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