

PROTEUS®
Copolymer Polypropylene

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PHYSICAL PROPERTIES

Versatility is the word that best describes Proteus Co-Polymer. Perfect for fire truck tanks because it is inexpensive, easy to fabricate and won't crack from road vibration, Proteus Co-Polymer also works well in those orthotic devices that require a lower degree of rigidity. It can also be used in a variety of applications requiring chemical resistance and/or FDA compliance. This material is noted for its high strength-to-weight ratio, excellent chemical resistance and high performance in thermoforming and corrosive environments. Proteus® copolymer polypropylene also meets all food grade regulations and is very resistant to acid.

Property	Method	Unit	Nominal Value*
Density	ASTM D-792	g/cm ³	0.897
Tensile strength at yield	ASTM D-638	psi	4100
Tensile modulus	ASTM D-638	psi	n/a
Elongation at yield	ASTM D-638	%	23
Elongation at break	ASTM D-638	%	n/a
Tensile impact	DIN 53448	ft-lbs/in ²	384
Flexural modulus	ASTM D-790	psi	183,860
Flexural strength	ASTM D-790	psi	3741
Izod impact	ASTM D-4020	ft-lbs/in ²	7.8
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	290
Hardness	ASTM D-2240	Shore D	77
Coefficient of linear thermal expansion	ASTM D-696	in/in/°F	4.6 x 10 ⁻⁵
Heat deflection temperature, 66 psi	ASTM D-648	°F	173
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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