

TECHNICAL INFORMATION

ACETAL

GP Natural (Copolymer)

Physical Properties

Acetal provides high strength and stiffness coupled with increased dimensional stability and ease of machining. As a semi-crystalline material, acetal is also characterized by a low coefficient of friction and good wear properties especially in wet environments. In high moisture or submerged applications acetal outperforms nylon by a factor of at least 3 to 1. In-line photometric equipment ensures a porosity-free acetal. Acetal meets all regulations for grade applications.

Property	Method	Unit	Nominal Value*
Density	ASTM D-792	g/cm ³	1.41
Tensile strength at yield	ASTM D-638	psi	9,500
Tensile modulus	ASTM D-638	psi	400,000
Elongation at yield	ASTM D-638	%	n/a
Elongation at break	ASTM D-638	%	30
Tensile impact	DIN 53448	ft-lbs/in ²	n/a
Flexural modulus	ASTM D-790	psi	400,000
Flexural strength	ASTM D-790	psi	12,000
Izod impact	ASTM D-4020	ft-lbs/in ²	n/a
IZOD impact notched	ASTM D-2240	ft-lbs/in ²	1
Compressive modulus	ASTM D-695	psi	n/a
Compressive deformation	ASTM D-695	1% at 1000 psi	n/a
Hardness	ASTM D-2240	Shore D	85
Melting point	ASTM D-3417	°F	335
Coefficient of linear thermal expansion	ASTM D-696	in/in/°F	5.4 x 10 ⁻⁵
Heat deflection temperature, 264 psi	ASTM D-648	°F	220
Vicat softening temperature	ASTM D-1525	°F	n/a
Max. operating temp. (Air)		°F	180
Volume Resistivity	ASTM D-257	Ohm-cm	n/a
Surface Resistivity	ASTM D-257	Ohm	>10 ¹³
Water absorption 24hrs.	ASTM D-570	%	0.3
Water absorption, Saturation	ASTM D-570	%	0.9

*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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