

Product Data Sheet

Product : Quadrant Polypenco Korea Acetron® POM-H, Acetal, homopolymer, unfilled, extruded

Categories : Polymer; Thermoplastic; Acetal(POM); Acetal Homopolymer; Unreinforced

Material Notes : Acetron POM-H is a homopolymer acetal. Stocked in rod and plate, it offers slightly higher mechanical properties than Acetron POM-C, but may contain a low-density center, especially in large cross-section. Delrin is ideal for small diameter, thin-walled bushings that benefit from the additional strength and hardness of homopolymer acetal. Data provided by Polypenco Korea and Quadrant Engineering Plastic Products from tests on stock shapes and parts produced by Polypenco Korea and Quadrant EPP.

Properties	Units	Test Methods	Acetron® POM-H
Physical Properties			
Specific Gravity	g/cc	ASTM D 792	1.41
Water Absorption, Immersion, 24hr	%	ASTM D 570(2)	0.2
Water Absorption at Saturation, Immersion	%	ASTM D 570(2)	0.9
Mechanical Properties			
Rockwell Hardness, M	M scale	ASTM D 785	89
Rockwell Hardness, R	R scale	ASTM D 785	122
Hardness, Shore D	D	ASTM D 2240	86
Tensile Strength	MPa	ASTM D 638	75.8
Tensile Modulus	GPa	ASTM D 638	3.10
Elongation at Break	%	ASTM D 638	30
Flexural Yield Strength	MPa	ASTM D 790	89.6
Flexural Modulus	GPa	ASTM D 790	3.10
Compressive Strength	MPa	10% Def.; ASTM D 695	110
Compressive Modulus	GPa	ASTM D 695	3.10
Shear Strength	MPa	ASTM D 732	62.1
Coefficient of Friction; Dry vs. Steel	-	QTM 55007	0.25
K (wear) Factor	mm ³ /N-M	QTM 55010	403 x 10 ⁻⁸
Limiting Pressure Velocity; 4:1 safety factor	MPa-m/sec	QTM 55007	0.0946
Izod Impact, Notched	J/m	ASTM D 256	53.4
Electrical Properties			
Surface Resistivity per Square	Ω	EOS/ESD S11.11	≥ 1.0X10 ¹³

Dielectric Constant	-	ASTM D 150	3.70 @Frequency 1e+6 Hz
Dielectric Strength; Short term	kV/mm	ASTM D 149	17.7
Dissipation Factor	-	ASTM D 149	0.005 @Frequency 1e+6 Hz

Thermal Properties

Coefficient of Thermal Expansion; CTE, linear	µm/m-°C	ASTM E 831	84.6 @Temperature -40.0 - 149 °C
Thermal Conductivity	W/m-K	ASTM F 433	0.360
Melting point ; Crystalline, Peak	°C	ASTM D 3418	175
Maximum Service Temperature, Air	°C	Long Term	82.2
Deflection Temperature at 1.8 Mpa (264psi)	°C	ASTM D 648	121
Flammability, UL94 ; 1/8inch(Estimated Rating)	-	-	HB

Compliance Property

Comments

3A-Dairy	No
Canada AG	Yes
FDA	Yes
NSF	Yes
USDA	Yes
RoHS	Yes

Descriptive Properties

Color	Natural / Black
Machinability	1-10, 1=Easier to Machine

Chemical Resistance Properties

Acid, Strong (pH1-3)	Unacceptable
Acids, Weak	Limited
Alcohols	Acceptable
Alkalies, Weak	Unacceptable
Alkalies, Strong (pH 11-14)	Acceptable
Chlorinated Solvent	Limited
Conductive / Static Dissipative	No
Continuous Sunlight	Limited
Hot Water / Steam	Limited
Hydrocarbons – Aliphatic	Acceptable
Hydrocarbons – Aromatic	Acceptable

Inorganic Salt Solution

Acceptable

Ketones, Esters

Acceptable

Miscellaneous Properties

Targeted Usage

Load + Bearing

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