

Product Data Sheet

Product : Quadrant Polypenco Korea ABS-Acrylonitrile Butadiene Styrene, Unfilled, extruded

Categories : Polymer; Thermoplastic; Acrylonitrile Butadiene Styrene (ABS)

Material Notes : ABS is Quadrant Polypenco Korea's product and is composed of three ingredients with Acrylonitrile Butadiene and Styrene. The ABS product is the impact resistance thermoplasticity. ABS is the polish, machinability, mechanical properties impact resistance excellent, dimensional stability and wide size ranges.

Properties	Units	Test Methods	ABS
Physical Properties			
Specific Gravity	g/cc	ASTM D 792	1.04
Water Absorption, Immersion, 24hr	%	ASTM D 570(2)	0.4
Water Absorption at Saturation, Immersion	%	ASTM D 570(2)	0.1
Mechanical Properties			
Rockwell Hardness, M	M scale	ASTM D 785	-
Rockwell Hardness, R	R scale	ASTM D 785	99
Hardness, Shore D	D	ASTM D 2240	-
Tensile Strength	MPa	ASTM D 638	41.9
Tensile Modulus	GPa	ASTM D 638	2.23
Elongation at Break	%	ASTM D 638	5.5
Flexural Yield Strength	MPa	ASTM D 790	67
Flexural Modulus	GPa	ASTM D 790	2.32
Compressive Strength	MPa	10% Def.; ASTM D 695	-
Compressive Modulus	GPa	ASTM D 695	-
Shear Strength	MPa	ASTM D 732	-
Coefficient of Friction; Dry vs. Steel	-	QTM 55007	-
K (wear) Factor	mm ³ /N-M	QTM 55010	-
Limiting Pressure Velocity; 4:1 safety factor	MPa-m/sec	QTM 55007	-
Izod Impact, Notched	J/m	ASTM D 256	277
Electrical Properties			
Surface Resistivity per Square	Ω	EOS/ESD S11.11	≥ 1X10 ¹³
Dielectric Constant	-	ASTM D 150	-

Dielectric Strength; Short term	kV/mm	ASTM D 149	-
Dissipation Factor	-	ASTM D 150	-

Thermal Properties

Coefficient of Thermal Expansion; CTE, linear	m/m-K	ASTM D 696	80X10-6 @Temperature 23.0 - 100 °C
Thermal Conductivity	W/m-K	ASTM F 433	0.25
Melting point ; Crystalline, Peak	°C	ASTM D 3418	-
Maximum Service Temperature, Air	°C	Long Term	-
Deflection Temperature at 1.8 Mpa (264psi)	°C	ASTM D 648	-
Flammability, UL94 ; 1/8inch(Estimated Rating)	-	-	HB

Compliance Property

Comments

3A-Dairy	Yes
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
Alcohls	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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