

Jamplast JPAC

Acetal (POM) Homopolymer

Jamplast, Inc.

Message:

Acetal copolymer grade JPAC is a medium viscosity polymer providing optimum performance in general purpose injection molding and extrusion of thin walled tubing and thin gauge film.

General Information			
Features	Copolymer		
	General Purpose		
	Good Dimensional Stability		
	Good Moldability		
	Good Toughness		
	High Gloss		
	Medium Viscosity		
Uses	Bearings		
	Cams		
	Gears		
	Housings		
	Knobs		
	Pump Parts		
	Springs		
	Valves/Valve Parts		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.41	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	9.0	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow	2.2	%	
Across Flow	1.8	%	
Water Absorption			ASTM D570
24 hr	0.22	%	
Saturation	0.80	%	
Equilibrium, 23°C, 50% RH	0.10	%	
Hardness	Nominal Value	Unit	Test Method

Rockwell Hardness (M-Scale)	80		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2830	MPa	ASTM D638
Tensile Strength (Yield, 23°C)	60.7	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	60	%	ASTM D638
Flexural Modulus (23°C)	2590	MPa	ASTM D790
Flexural Strength (Break)	89.6	MPa	ASTM D790
Compressive Strength	110	MPa	ASTM D695
Shear Strength (23°C)	53.1	MPa	ASTM D732
Coefficient of Friction			ASTM D1894
vs. Itself - Static	0.35		
vs. Metal - Static	0.15		
Taber Abrasion Resistance			ASTM D1044
1000 Cycles, CS-17 Wheel	14.0	mg	
1000 Cycles, CS-17F Wheel	6.00	mg	
1000 Cycles, CS-18 Wheel	3.00	mg	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	69	J/m	ASTM D256
Unnotched Izod Impact	1100	J/m	ASTM D256
Tensile Impact Strength (23°C)	147	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	158	°C	
1.8 MPa, Unannealed	110	°C	
Glass Transition Temperature	-50.0	°C	ASTM E1356
Vicat Softening Temperature	162	°C	ASTM D1525
Melting Temperature	165	°C	
CLTE - Flow	8.5E-5	cm/cm/°C	ASTM D696
Specific Heat	1460	J/kg/°C	ASTM C351
Thermal Conductivity	0.23	W/m/K	ASTM C177
RTI Elec			UL 746
1.47 mm	105	°C	
3.05 mm	105	°C	
6.10 mm	105	°C	
RTI Imp			UL 746
1.47 mm	90.0	°C	
3.05 mm	90.0	°C	
6.10 mm	90.0	°C	
RTI Str			UL 746
1.47 mm	90.0	°C	
3.05 mm	100	°C	
6.10 mm	100	°C	

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.3E+16	ohms	ASTM D257
Volume Resistivity	1.0E+14	ohms·cm	ASTM D257
Dielectric Strength	20	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
100 Hz	3.70		
10 kHz	3.70		
1.00 GHz	3.70		
1.02 mm, 1 kHz	3.70		
1.02 mm, 1 MHz	3.70		
Dissipation Factor			ASTM D150
100 Hz	1.0E-3		
10 kHz	1.5E-3		
1.02 mm, 1 kHz	1.0E-3		
1.02 mm, 1 MHz	6.0E-3		
Arc Resistance	240	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	3.0	hr	
Suggested Max Regrind	25	%	
Rear Temperature	171	°C	
Middle Temperature	182	°C	
Front Temperature	188	°C	
Nozzle Temperature	193	°C	
Processing (Melt) Temp	182 to 199	°C	
Mold Temperature	76.7 to 93.3	°C	
Injection Pressure	100 to 138	MPa	
Holding Pressure	89.6 to 138	MPa	
Back Pressure	0.00 to 0.345	MPa	
Screw Speed	20 to 40	rpm	
Clamp Tonnage	4.1 to 6.9	kN/cm ²	
Cushion	3.18 to 6.35	mm	
Screw L/D Ratio	16.0:1.0 to 24.0:1.0		

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