

TENAC™ 2010

Asahi Kasei Corporation - Acetal (POM) Homopolymer

General Information

General			
Features AKEP website	• Creep Resistant	• Fatigue Resistant	• Viscosity, High
Uses	• Automotive Applications • Bearings • Conveyor Parts	• Engineering Parts • Fasteners • Gears	• Housings
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403)		
Part Marking Code (ISO11469) (ISO 11469)	• >POM<		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.42	g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.7	g/10 min	ISO 1133
Molding Shrinkage - Flow	1.8 to 2.2	%	Internal Method
Water Absorption (24 hr, 23°C, 50% RH)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2900	MPa	ISO 527-1
Tensile Stress			
Yield	70.0	MPa	ISO 527-2
--	69.0	MPa	ASTM D638
Tensile Elongation (Break)	55	%	ASTM D638 ISO 527-2
Flexural Modulus	2700	MPa	ASTM D790 ISO 178
Flexural Strength	97.0	MPa	ASTM D790
Taber Abrasion Resistance	13.0	mg	ASTM D1044



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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	15	kJ/m ²	ISO 179
Notched Izod Impact	130	J/m	ASTM D256
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	94		
R-Scale	120		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	172	°C	ASTM D648
0.45 MPa, Unannealed	163	°C	ISO 75-2/B
1.8 MPa, Unannealed	130	°C	ASTM D648
1.8 MPa, Unannealed	100	°C	ISO 75-2/A
CLTE - Flow	1.0E-4	cm/cm/°C	ASTM D696 ISO 11359-2
Specific Heat	1470	J/kg/°C	
Thermal Conductivity	0.23	W/m/K	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16 to 1.0E+17	ohms	ASTM D257
Volume Resistivity (23°C)	1.0E+15 to 1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	18	kV/mm	ASTM D149
Dielectric Constant (23°C, 1 MHz)	3.80		ASTM D150
Dissipation Factor (23°C, 1 MHz)	7.0E-3		ASTM D150
Arc Resistance	250	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.8 mm	HB		
1.5 mm	HB		

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Hot Air Dryer	80 to 90	°C
Drying Time - Hot Air Dryer	3.0 to 4.0	hr
Processing (Melt) Temp	190 to 210	°C
Mold Temperature	> 60	°C



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Curve Data

Isothermal Stress vs. Strain (ISO 11403)

