AsahiKASEI

Tenac™ 2010

Asahi Kasei Corporation - Acetal (POM) Homopolymer

Tuesday, May 31, 2016

General Information

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • North America	
Features	• Creep Resistant • Fatigue Resistant • Good Dimensional Stability	• Good Toughness • High Impact Resistance • High Stiffness	• High Strength • High Viscosity • Homopolymer
Uses	• Automotive Applications • Bearings • Conveyor Parts	• Engineering Parts • Fasteners • Gears	• Housings

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.42	g/cm³	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 (23°C, 24 hr, 50% RH)	0.20	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2900	MPa	ISO 527-2
Tensile Stress			
Yield	70.0	MPa	ISO 527-2
--	75.0	MPa	ASTM D638
Tensile Elongation (Break)	55	%	ASTM D638 ISO 527-2
Flexural Modulus			
--	2720	MPa	ASTM D790
--	2700	MPa	ISO 178
Flexural Strength	97.0	MPa	ASTM D790
Taber Abrasion Resistance	13.0	mg	ASTM D1044
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength	15	kJ/m²	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

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Thermal	Nominal Value	Unit	Test Method
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
0.800 mm	HB		
1.50 mm	HB		

Notes

[1] Typical properties: these are not to be construed as specifications.