AsahiKASEI

Tenac™ 3010

Asahi Kasei Chemicals Corporation - Acetal (POM) Homopolymer

Friday, February 26, 2016

General Information

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • North America	
Features	• Fatigue Resistant • Good Creep Resistance • 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
Automotive Specifications	• BMW 601.00.0 • BOSCH 5515213 022 • BOSCH 5515213 902 Color: Black • BOSCH N28 BN21 Color: Black	• BOSCH N28 BN21 Color: Natural • DAIMLER DBL 5403 • FORD WSK-M4D637-A1 • GM GMW19P-POM-H1	• ITT SWF 20.100 • NISSAN POM-IVX-1 • VDO MV 4831 • VOLKSWAGEN KTHC 909

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)	2.8	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	3000	MPa	ISO 527-2
Tensile Stress			
Yield	70.0	MPa	ISO 527-2
--	69.0	MPa	ASTM D638
Tensile Elongation (Break)	50	%	ASTM D638 ISO 527-2
Flexural Modulus			
--	2700	MPa	ASTM D790
--	2800	MPa	ISO 178
Flexural Strength	96.0	MPa	ASTM D790
Taber Abrasion Resistance	13.0	mg	ASTM D1044
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength	13	kJ/m²	ISO 179
Notched Izod Impact	120	J/m	ASTM D256
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ASTM D785
M-Scale	94		
R-Scale	120		

Tenac™ 3010

Asahi Kasei Chemicals Corporation - Acetal (POM) Homopolymer

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	133	°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 (1.50 mm)	HB		UL 94

Notes

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