

TENAC™-C Z4520

Asahi Kasei Corporation - Acetal (POM) Copolymer

General Information

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Low VOC		
Uses	• Automotive Applications • Engineering Parts	• Gears • Housings	
Automotive Specifications	• GM GMW22P-POM-C2D	• MERCEDES BENZ DBL 5403.00	• MERCEDES BENZ DBL 5410.00
Part Marking Code (ISO 11469)	• >POM<		

 Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.41		ASTM D792
Density	1.41	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	9.0	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.016 to 0.020	in/in	Internal Method
Water Absorption (24 hr, 73°F, 50% RH)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	392000	psi	ISO 527-1
Tensile Strength	9140	psi	ASTM D638
Tensile Stress (Yield)	9140	psi	ISO 527-2
Tensile Strain (Yield)	9.5	%	ISO 527-2
Tensile Elongation (Break)	35	%	ASTM D638
Nominal Tensile Strain at Break	35	%	ISO 527-2
Flexural Modulus	370000	psi	ASTM D790
Flexural Modulus	363000	psi	ISO 178
Flexural Strength	13100	psi	ASTM D790
Taber Abrasion Resistance	14.0	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	3.3	ft-lb/in ²	ISO 179
Notched Izod Impact	1.4	ft-lb/in	ASTM D256
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	80		
R-Scale	115		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	316	°F	ASTM D648
Deflection Temperature Under Load (66 psi, Unannealed)	313	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	230	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed)	212	°F	ISO 75-2/A
CLTE - Flow	5.6E-5	in/in/°F	ASTM D696
CLTE - Flow	5.6E-5	in/in/°F	ISO 11359-2
Specific Heat	0.350	Btu/lb/°F	
Thermal Conductivity	1.6	Btu-in/hr/ft ² /°F	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16 to 1.0E+17	ohms	ASTM D257



Volume Resistivity (73°F)	1.0E+15 to 1.0E+16 ohms·cm	ASTM D257
Dielectric Strength	480 V/mil	ASTM D149
Dielectric Constant (73°F, 1 MHz)	3.90	ASTM D150
Dissipation Factor (73°F, 1 MHz)	8.0E-3	ASTM D150
Arc Resistance	250 sec	ASTM D495
Additional Information	Nominal Value Unit	Test Method
Formaldehyde Emissions	< 2 ppm	VDA 275

Processing Information

Injection	Nominal Value Unit
Drying Temperature - Hot Air Dryer	176 to 194 °F
Drying Time - Hot Air Dryer	3.0 to 4.0 hr
Processing (Melt) Temp	356 to 410 °F
Mold Temperature	> 140 °F

Notes

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

