

TENAC™ 4012

Asahi Kasei Corporation - Acetal (POM) Homopolymer

General Information

General			
Additive	• Impact Modifier		
Features AKEP website	• Impact Resistance, Medium	• Soft	
Uses	• Engineering Parts	• Gears	• Housings
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)	10	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	2700	MPa	ISO 527-1
Tensile Stress			
Yield	66.0	MPa	ISO 527-2
--	64.0	MPa	ASTM D638
Tensile Elongation			
Break	45	%	ASTM D638
Break	40	%	ISO 527-2
Flexural Modulus			
--	2600	MPa	ASTM D790
--	2500	MPa	ISO 178
Flexural Strength	92.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	10	kJ/m ²	ISO 179
Notched Izod Impact	92	J/m	ASTM D256



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Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	85		
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	151	°C	ISO 75-2/B
1.8 MPa, Unannealed	130	°C	ASTM D648
1.8 MPa, Unannealed	80.0	°C	ISO 75-2/A
CLTE - Flow	1.0E-4	cm/cm/°C	ASTM D696 ISO 11359-2
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	

Notes

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

