

Tenac™ 4012

Acetal (POM) Homopolymer
Asahi Kasei Chemicals Corporation

Message:

Tenac™ 4012 is an Acetal (POM) Homopolymer product. It is available in Africa & Middle East, Asia Pacific, Europe, or North America. Applications of Tenac™ 4012 include engineering/industrial parts and housings.

Characteristics include:

- Flame Rated
- Homopolymer
- Impact Modified
- Impact Resistant
- Medium Viscosity

General Information	
UL YellowCard	E48285-240767
Additive	Impact Modifier
Features	Good Impact Resistance
	High Elongation
	Homopolymer
	Impact Modified
	Medium Viscosity
Soft	

Uses	Engineering Parts
	Gears
	Housings

Physical	Nominal Value	Unit	Test Method
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 (23°C, 24 hr, 50% RH)	0.20	%	ASTM D570

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	85		
R-Scale	120		

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2700	MPa	ISO 527-2
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
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		Test Method
Flame Rating			UL 94
0.840 mm	HB		
1.50 mm	HB		

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