

Tenac™ 5050

Acetal (POM) Homopolymer
Asahi Kasei Chemicals Corporation

Message:

Tenac™ 5050 is an Acetal (POM) Homopolymer product. It is available in Africa & Middle East, Asia Pacific, Europe, or North America. Applications of Tenac™ 5050 include automotive, engineering/industrial parts and housings.

Characteristics include:

- Flame Rated
- Fast Molding Cycle
- Homopolymer
- Medium Viscosity
- Warp Resistant

General Information	
UL YellowCard	E48285-240783
Features	Fast Molding Cycle
	Homopolymer
	Low Warpage
	Medium Viscosity
Uses	Engineering Parts
	Gears
	General Purpose
	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)	21	g/10 min	ISO 1133
Molding Shrinkage - Flow	1.7 to 2.1	%	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	94		
R-Scale	120		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3300	MPa	ISO 527-2
Tensile Stress			
Yield	73.0	MPa	ISO 527-2
--	72.0	MPa	ASTM D638
Tensile Elongation			
Break	28	%	ASTM D638
Break	25	%	ISO 527-2

Flexural Modulus			
--	3060	MPa	ASTM D790
--	3100	MPa	ISO 178
Flexural Strength	108	MPa	ASTM D790
Taber Abrasion Resistance	13.0	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	7.0	kJ/m ²	ISO 179
Notched Izod Impact	68	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	165	°C	ISO 75-2/B
1.8 MPa, Unannealed	136	°C	ASTM D648
1.8 MPa, Unannealed	105	°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			UL 94
0.810 mm	HB		
1.50 mm	HB		

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