Tenac® LM511

Asahi Kasei Corporation - Acetal (POM) Homopolymer

Tuesday, May 13, 2008

General Information

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Asia Pacific	• Europe
Additive	• Lubricant		
Features	• Friction, Low • Homopolymer	• Lubricated • Viscosity, Medium	• Wear Resistance, Good
Uses	• Electrical/Electronic Applications	• Household Goods	• Industrial Applications
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

ASTM and ISO Properties [1]

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity	1.42	1.42	ASTM D792
Density	1.42 g/cm³	1.42 g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)	22 g/10 min	22 g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	22 g/10 min	22 g/10 min	ISO 1133
Molding Shrink (Flow)	1.8 to 2.2 %	1.8 to 2.2 %	ASTM D955
Molding Shrinkage			ISO 294-4
Across Flow	1.8 to 2.2 %	1.8 to 2.2 %	
Flow	1.8 to 2.2 %	1.8 to 2.2 %	
Water Absorption (24 hr)	0.20 %	0.20 %	ASTM D570
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	435000 psi	3000 MPa	ISO 527-1, -2
Tensile Strength	8700 psi	60.0 MPa	ASTM D638
Tensile Stress (Yield)	9570 psi	66.0 MPa	ISO 527-1, -2
Tensile Elongation (Break)	30 %	30 %	ASTM D638
Tensile Strain (Break)	45 %	45 %	ISO 527-1, -2
Flexural Modulus	397000 psi	2740 MPa	ASTM D790
Flexural Strength	13100 psi	90.0 MPa	ASTM D790
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
73 °F (23 °C)	3.33 ft·lb/in²	7.00 kJ/m²	
Notched Izod Impact	1.11 ft·lb/in	59.0 J/m	ASTM D256
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Heat Deflection Temperature			ISO 75B-1, -2
66 psi (0.45 MPa), Unannealed	320 °F	160 °C	
Heat Deflection Temperature			ISO 75A-1, -2
264 psi (1.8 MPa), Unannealed	203 °F	95.0 °C	
CLTE, Flow (TMA)	0.000056 in/in/°F	0.00010 cm/cm/°C	ASTM E831
Flammability	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Flame Rating - UL	HB	HB	UL 94

Additional Properties

The values listed as Mold Shrinkage, were tested in accordance with Asahi Kasei method.

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Injection	**Nominal Value (English)**	**Nominal Value (SI)**
Drying Temperature	176 to 194 °F	80.0 to 90.0 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Processing (Melt) Temp	374 to 410 °F	190 to 210 °C
Mold Temperature	122 °F	50.0 °C
Extrusion	**Nominal Value (English)**	**Nominal Value (SI)**
Cylinder Zone 1 Temp.	374 °F	190 °C
Cylinder Zone 2 Temp.	392 °F	200 °C
Cylinder Zone 3 Temp.	410 °F	210 °C
Melt Temperature	374 to 410 °F	190 to 210 °C

Notes

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