DELRIN 520MP NC010

Delrin USA, LLC - *Acetal (POM) Homopolymer*

General Information

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Mold Release	• PTFE Micropowder Lubricant: 20%	
Features	• Good Mold Release • Homopolymer	• Low Friction • Lubricated	• Medium Viscosity • Wear Resistant
RoHS Compliance	• Contact Manufacturer		
Part Marking Code (ISO 11469)	• >POM-SD20<		
Resin ID (ISO 1043)	• POM-SD20		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.54	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	8.0	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.5	%	
Flow	1.9	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	421000	psi	ISO 527-1
Tensile Stress (Yield)	7690	psi	ISO 527-2
Tensile Strain (Yield)	13	%	ISO 527-2
Nominal Tensile Strain at Break	10	%	ISO 527-2
Tensile Creep Modulus (1 hr)	218000	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	116000	psi	ISO 899-1
Flexural Modulus	392000	psi	ISO 178
Poisson's Ratio	0.37		
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	1.9	ft·lb/in²	
73°F	1.4	ft·lb/in²	
Charpy Unnotched Impact Strength (73°F)	24	ft·lb/in²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	1.9	ft·lb/in²	ISO 180/1A
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ISO 2039-2
M-Scale	85		
R-Scale	121		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	320	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	201	°F	ISO 75-2/A
Melting Temperature [2]	352	°F	ISO 11357-3
CLTE - Flow			ISO 11359-2
--	5.6E-5	in/in/°F	
-40 to 73°F	5.0E-5	in/in/°F	
CLTE - Transverse			ISO 11359-2
--	5.6E-5	in/in/°F	

-40 to 73°F	5.0E-5	in/in/°F	
RTI Elec			UL 746B
0.06 in	221	°F	
0.12 in	221	°F	
RTI Imp			UL 746B
0.06 in	185	°F	
0.12 in	185	°F	
RTI Str			UL 746B
0.06 in	194	°F	
0.12 in	194	°F	
Annealing Temperature	320	°F	
Annealing Time - Optional	30.0	min/mm	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Relative Permittivity (1 MHz)	3.20		IEC 62631-2-1
Dissipation Factor (1 MHz)	9.0E-3		IEC 62631-2-1
Flammability	**Nominal Value**	**Unit**	**Test Method**
Burning Rate [3] (0.0394 in)	1.5	in/min	ISO 3795
Flame Rating			UL 94
0.06 in	HB		
0.12 in	HB		
Flammability Classification			IEC 60695-11-10, -20
0.06 in	HB		
0.12 in	HB		
FMVSS Flammability	B		FMVSS 302

Processing Information

Injection	**Nominal Value**	**Unit**
Drying Temperature	176	°F
Drying Time - Desiccant Dryer	2.0 to 4.0	hr
Suggested Max Moisture	< 0.20	%
Processing (Melt) Temp	410 to 428	°F
Melt Temperature, Optimum	419	°F
Mold Temperature	176 to 212	°F
Mold Temperature, Optimum	194	°F
Holding Pressure	11600 to 14500	psi
Drying Recommended	yes	
Hold Pressure Time	8.00	s/mm
Maximum Screw Tangential Speed	709	in/min

Notes

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

[2] 10°C/min

[3] FMVSS 302