DELRIN 500CPE 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		
Features	• Good Mold Release • Good Processability	• Good Thermal Stability • Homopolymer	• Low VOC • Medium Viscosity
Uses	• Automotive Applications		
RoHS Compliance	• Contact Manufacturer		
Part Marking Code (ISO 11469)	• >POM<		
Resin ID (ISO 1043)	• POM		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.42	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	15	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	13	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.9	%	
Flow	2.0	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	450000	psi	ISO 527-1
Tensile Stress (Yield)	10400	psi	ISO 527-2
Tensile Strain (Yield)	18	%	ISO 527-2
Nominal Tensile Strain at Break	33	%	ISO 527-2
Flexural Modulus	435000	psi	ISO 178
Flexural Stress	13500	psi	ISO 178
Poisson's Ratio	0.37		
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	3.8	ft·lb/in²	
73°F	4.3	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	160	ft·lb/in²	
73°F [2]	120	ft·lb/in²	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (264 psi, Unannealed)	207	°F	ISO 75-2/A
Melting Temperature [3]	352	°F	ISO 11357-3
CLTE - Flow	5.3E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	5.6E-5	in/in/°F	ISO 11359-2
Annealing Time - Optional	30.0	min/mm	
Flammability	**Nominal Value**	**Unit**	**Test Method**
Burning Rate [4] (0.0394 in)	2.3	in/min	ISO 3795
Flame Rating			UL 94
0.031 in	HB		
0.06 in	HB		
Flammability Classification			IEC 60695-11-10, -20

0.03 in	HB		
0.06 in	HB		
FMVSS Flammability	B		FMVSS 302
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Melt Density	1.19	g/cm³	
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Emission	< 2	ppm	VDA 275
Fogging			ISO 6452
F-value (refraction)	88	%	
G-value (condensate)	0.040	ppm	

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	392 to 410	°F
Melt Temperature, Optimum	401	°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] >250 kJ/m2

[3] 10°C/min

[4] FMVSS 302