DELRIN 100 BK602

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 Strength	• Good Toughness • High Viscosity	• Homopolymer
Uses	• Mold Making		
RoHS Compliance	• Contact Manufacturer		
Automotive Specifications	• FORD WSK-M4D637-A1	• GM GMP.POM.003	
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)	2.4	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	2.0	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.8	%	
Flow	2.1	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	457000	psi	ISO 527-1
Tensile Stress (Yield)	10400	psi	ISO 527-2
Tensile Strain (Yield)	23	%	ISO 527-2
Nominal Tensile Strain at Break	40	%	ISO 527-2
Flexural Modulus	421000	psi	ISO 178
Poisson's Ratio	0.37		
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	5.0	ft·lb/in²	
73°F	5.7	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	190	ft·lb/in²	
73°F	No Break		
Notched Izod Impact Strength			ISO 180/1A
-40°F	4.8	ft·lb/in²	
73°F	5.2	ft·lb/in²	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ISO 2039-2
M-Scale	91		
R-Scale	121		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (264 psi, Unannealed)	207	°F	ISO 75-2/A
Vicat Softening Temperature	347	°F	ISO 306/A50
Melting Temperature [2]	352	°F	ISO 11357-3
CLTE - Flow			ISO 11359-2

--	6.1E-5	in/in/°F	
-40 to 73°F	5.6E-5	in/in/°F	
CLTE - Transverse			ISO 11359-2
--	6.1E-5	in/in/°F	
-40 to 73°F	5.6E-5	in/in/°F	
RTI Elec			UL 746B
0.030 in	122	°F	
0.06 in	221	°F	
0.12 in	221	°F	
0.24 in	221	°F	
RTI Imp			UL 746B
0.030 in	122	°F	
0.06 in	185	°F	
0.12 in	185	°F	
0.24 in	185	°F	
RTI Str			UL 746B
0.030 in	122	°F	
0.06 in	194	°F	
0.12 in	194	°F	
0.24 in	194	°F	
Annealing Temperature	320	°F	
Annealing Time - Optional	30.0	min/mm	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+15	ohms	IEC 62631-3-2
Volume Resistivity	> 1.0E+13	ohms·m	IEC 62631-3-1
Electric Strength	1100	V/mil	IEC 60243-1
Relative Permittivity			IEC 62631-2-1
100 Hz	4.00		
1 MHz	3.90		
Dissipation Factor			IEC 62631-2-1
100 Hz	5.0E-4		
1 MHz	6.0E-3		
Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Burning Rate [3] (0.0787 in)	1.4	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	

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	13100 to 16000	psi
Drying Recommended	yes	
Hold Pressure Time	8.00	s/mm
Maximum Screw Tangential Speed	472	in/min

	Nominal Value
erature	176
	2.0 to 4.0
lax Moisture	< 0.20

Melt Temperature	383 to 401 °F
Extrusion Melt Temperature, Optimum	392 °F

Notes

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

[2] 10°C/min

[3] FMVSS 302