

DELTRIN RAFG511DP NC010

Delrin USA, LLC - Acetal (POM) Homopolymer

General Information
General

Material Status	<ul style="list-style-type: none"> Commercial: Active 		
Availability	<ul style="list-style-type: none"> Africa & Middle East Asia Pacific 	<ul style="list-style-type: none"> Europe Latin America 	<ul style="list-style-type: none"> North America
Additive	<ul style="list-style-type: none"> Mold Release 		
Features	<ul style="list-style-type: none"> Creep Resistant Crystalline Fast Molding Cycle Fatigue Resistant Food Contact Acceptable 	<ul style="list-style-type: none"> Good Mold Release Good Thermal Stability High Dimensional Stability Homopolymer Low Emissions 	<ul style="list-style-type: none"> Low Warpage Medium Viscosity Renewable Resource Content
RoHS Compliance	<ul style="list-style-type: none"> Contact Manufacturer 		
Part Marking Code (ISO 11469)	<ul style="list-style-type: none"> >POM< 		
Resin ID (ISO 1043)	<ul style="list-style-type: none"> POM 		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.42	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	14	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	13	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.8	%	
Flow	1.9	%	
Water Absorption (Saturation, 73°F, 0.0787 in)	0.90	%	ISO 62
Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH)	0.30	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	508000	psi	ISO 527-1
Tensile Stress (Yield)	10900	psi	ISO 527-2
Tensile Strain (Yield)	12	%	ISO 527-2
Nominal Tensile Strain at Break	25	%	ISO 527-2
Flexural Modulus	464000	psi	ISO 178
Flexural Stress (3.5% Strain)	12600	psi	ISO 178
Poisson's Ratio	0.37		
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.9	ft·lb/in ²	
73°F	3.1	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	95	ft·lb/in ²	
73°F	100	ft·lb/in ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	325	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	221	°F	ISO 75-2/A
Vicat Softening Temperature	320	°F	ISO 306/B50
Melting Temperature ²	352	°F	ISO 11357-3
CLTE - Flow	5.6E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	6.1E-5	in/in/°F	ISO 11359-2
Annealing Temperature	320	°F	
Annealing Time - Optional	30.0	min/mm	



Flammability	Nominal Value	Unit	Test Method
Burning Rate (0.0394 in)	< 3.1	in/min	ISO 3795
Additional Information	Nominal Value	Unit	Test Method
Emission	< 8	ppm	VDA 275
Fogging			ISO 6452
F-value (refraction)	97	%	
G-value (condensate)	0.10	mg	

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	7.50	s/mm
Maximum Screw Tangential Speed	709	in/min
Extrusion	Nominal Value	Unit
Drying Temperature	167 to 185	°F
Drying Time	2.0 to 4.0	hr
Suggested Max 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

