Hostaform® C 9021 GV3/10

Celanese Corporation - Acetal (POM) Copolymer

Saturday, November 2, 2019

General Information

Product Description

Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 9988- POM-K, M-GNR, 03-002, GB10 POM copolymer Injection molding type, reinforced with ca. 10 % glass spheres; high resistance to thermal and oxidative degradation. UL-registration in natural and a thickness more than 0.81 mm, in black and a thickness more than 1.5 mm, as UL94 HB, temperature index UL 746 B for a thickness of 2 mm, electrical 105 °C, mechanical 95 °C (tensile impact) and 100 °C (tensile). Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1 mm. Ranges of applications: for low-warpage molded parts with higher rigidity and hardness. FMVSS = Federal Motor Vehicle Safety Standard (USA) UL = Underwriters Laboratories (USA)

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Bead, 10% Filler by Weight		
Features	• High Hardness	• High Stiffness	• Low Warpage
RoHS Compliance	• Contact Manufacturer		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• POM		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.47	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	9.00	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.7	%	
Flow	2.0	%	
Water Absorption (Saturation, 73°F)	0.80	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.15	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	450000	psi	ISO 527-2/1A
Tensile Stress (Yield)	7540	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	7.5	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	17	%	ISO 527-2/1A/50
Tensile Creep Modulus (1 hr)	406000	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	218000	psi	ISO 899-1
Flexural Modulus (73°F)	435000	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	1.9	ft·lb/in²	
73°F	1.9	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	29	ft·lb/in²	
73°F	29	ft·lb/in²	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Ball Indentation Hardness [2]	23200	psi	ISO 2039-1

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Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	226	°F	ISO 75-2/A
Vicat Softening Temperature	304	°F	ISO 306/B50
Melting Temperature [3]	331	°F	ISO 11357-3
CLTE - Flow	6.1E-5	in/in/°F	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+14	ohms·cm	IEC 60093
Electric Strength	890	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.30		
1 MHz	4.10		
Dissipation Factor			IEC 60250
100 Hz	0.015		
1 MHz	6.0E-3		
Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.03 in	HB		
0.06 in	HB		
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Melt Density	1.25	g/cm³	Internal Method
Melt Thermal Conductivity	1.4	Btu·in/hr/ft²/°F	Internal Method
Ejection Temperature	284	°F	
Specific Heat Capacity of Melt	0.447	Btu/lb/°F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212 to 248	°F
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Hopper Temperature	68 to 86	°F
Rear Temperature	338 to 356	°F
Middle Temperature	356 to 374	°F
Front Temperature	374 to 392	°F
Nozzle Temperature	374 to 410	°F
Processing (Melt) Temp	374 to 410	°F
Mold Temperature	176 to 248	°F
Injection Rate	Slow	
Back Pressure	< 290	psi

Injection Notes

Feeding zone temperature: 60 to 80°C
Zone4 temperature: 190 to 210°C
Hot runner temperature: 190 to 210°C

Notes

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

[2] 30s

[3] 10°C/min