

Celanese Hostaform® C 9021 GV3/10

Chemical abbreviation according to ISO 1043-1: POM
Information provided by Celanese

Physical Properties	Metric	English	Comments
Density	1.47 g/cc	0.0531 lb/in ³	ISO 1183
Density of Compound	1.25 g/cc	0.0452 lb/in ³	
Water Absorption at Saturation	0.80 %	0.80 %	ISO 62

Melt Flow	9.0 g/10 min @Load 2.16 kg, Temperature 190 °C	9.0 g/10 min @Load 4.76 lb, Temperature 374 °F	[cm ³ /10min]; ISO 1133
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Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	52.0 MPa	7540 psi	50mm/min; ISO 527-2/1A
Elongation at Break	17 %	17 %	
Elongation at Yield	7.5 %	7.5 %	50mm/min; ISO 527-2/1A
Tensile Modulus	3.10 GPa	450 ksi	50mm/min; ISO 527-2/1A
Flexural Modulus	3.00 GPa	435 ksi	ISO 178
Charpy Impact Unnotched	6.00 J/cm ²	28.6 ft-lb/in ²	ISO 179/1eU
	6.00 J/cm ² @Temperature -30.0 °C	28.6 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.400 J/cm ²	1.90 ft-lb/in ²	ISO 179/1eA
	0.400 J/cm ² @Temperature -30.0 °C	1.90 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	2800 MPa	406000 psi	ISO 899-1
Tensile Creep Modulus, 1000 hours	1500 MPa	218000 psi	ISO 899-1

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 60093
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	IEC 60093
Dielectric Constant	4.1 @Frequency 1e+6 Hz	4.1 @Frequency 1e+6 Hz	IEC 60250
	4.3 @Frequency 100 Hz	4.3 @Frequency 100 Hz	IEC 60250
Dielectric Strength	35.0 kV/mm	889 kV/in	IEC 60243-1
Dissipation Factor	0.0060 @Frequency 1e+6 Hz	0.0060 @Frequency 1e+6 Hz	IEC 60250
	0.015 @Frequency 100 Hz	0.015 @Frequency 100 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	110 $\mu\text{m}/\text{m}\cdot\text{C}^\circ$	61.1 $\mu\text{in}/\text{in}\cdot\text{F}^\circ$	ISO 11359-2
Specific Heat Capacity	1.87 $\text{J}/\text{g}\cdot\text{C}^\circ$	0.447 $\text{BTU}/\text{lb}\cdot\text{F}^\circ$	
Thermal Conductivity	0.195 $\text{W}/\text{m}\cdot\text{K}$	1.35 $\text{BTU}\cdot\text{in}/\text{hr}\cdot\text{ft}^2\cdot\text{F}^\circ$	
Melting Point	166 C°	331 F°	10 C° /min; ISO 11357-1,-2,-3
Deflection Temperature at 1.8 MPa (264 psi)	108 C°	226 F°	ISO 75-1, -2
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	
	HB @Thickness 0.810 mm	HB @Thickness 0.0319 in	

Processing Properties	Metric	English	Comments
Processing Temperature	80.0 - 120 C°	176 - 248 F°	cavity
	190 - 210 C°	374 - 410 F°	hot runner
Feed Temperature	60.0 - 80.0 C°	140 - 176 F°	
Zone 1	170 - 180 C°	338 - 356 F°	
Zone 2	180 - 190 C°	356 - 374 F°	
Zone 3	190 - 200 C°	374 - 392 F°	
Zone 4	190 - 210 C°	374 - 410 F°	
Die Temperature	190 - 210 C°	374 - 410 F°	
Melt Temperature	190 - 210 C°	374 - 410 F°	
Ejection Temperature	140 C°	284 F°	
Drying Temperature	100 - 120 C°	212 - 248 F°	
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	
Moisture Content	$\leq 0.15\%$	$\leq 0.15\%$	
Injection Pressure	60.0 - 120 MPa	8700 - 17400 psi	
Hold Pressure	60.0 - 120 MPa	8700 - 17400 psi	
Back Pressure	≤ 2.00 MPa	≤ 290 psi	
Screw Speed	70 rpm @Diameter 55.0 mm	70 rpm @Diameter 2.17 in	
	100 rpm @Diameter 40.0 mm	100 rpm @Diameter 1.57 in	
	150 rpm @Diameter 25.0 mm	150 rpm @Diameter 0.984 in	

Descriptive Properties	
Injection molding	Yes
Injection speed	slow
Processing conditions acc. ISO	9988