

Celanese Hostaform® C 9021 GV1/30

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

Physical Properties	Metric	English	Comments
Density	1.60 g/cc	0.0578 lb/in ³	ISO 1183
Density of Compound	1.35 g/cc	0.0488 lb/in ³	
Water Absorption at Saturation	0.90 %	0.90 %	ISO 62
Melt Flow	4.0 g/10 min @Load 2.16 kg, Temperature 190 °C	4.0 g/10 min @Load 4.76 lb, Temperature 374 °F	[cm ³ /10min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	135 MPa	19600 psi	5mm/min; ISO 527-2/1A
Elongation at Break	2.5 %	2.5 %	5mm/min; ISO 527-2/1A
Tensile Modulus	9.20 GPa	1330 ksi	50mm/min; ISO 527-2/1A
Flexural Modulus	7.80 GPa	1130 ksi	ISO 178
Charpy Impact Unnotched	3.00 J/cm ²	14.3 ft-lb/in ²	ISO 179/1eU
	3.50 J/cm ² @Temperature -30.0 °C	16.7 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179/1eA
	0.800 J/cm ² @Temperature -30.0 °C	3.81 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	7700 MPa	1.12e+6 psi	ISO 899-1
Tensile Creep Modulus, 1000 hours	5400 MPa	783000 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	4.3 @Frequency 1e+6 Hz	4.3 @Frequency 1e+6 Hz	IEC 60250
	4.3 @Frequency 100 Hz	4.3 @Frequency 100 Hz	IEC 60250
Dielectric Strength	40.0 kV/mm	1020 kV/in	IEC 60243-1
Dissipation Factor	0.0030 @Frequency 100 Hz	0.0030 @Frequency 100 Hz	IEC 60250
	0.0060 @Frequency 1e+6 Hz	0.0060 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 µm/m-°C	22.2 µin/in-°F	ISO 11359-2
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
Specific Heat Capacity	1.81 J/g-°C	0.433 BTU/lb-°F	
Thermal Conductivity	0.215 W/m-K	1.49 BTU-in/hr-ft ² -°F	
Melting Point	166 °C	331 °F	10°C/min; ISO 11357-1,-2,-3
Deflection Temperature at 1.8 MPa (264 psi)	160 °C	320 °F	ISO 75-1, -2
Deflection Temperature at 8.0 MPa	125 °C	257 °F	ISO 75-1, -2

Flammability, UL94

HB
@Thickness 1.57 mm
HB
@Thickness 3.18 mm

HB
@Thickness 0.0618 in
HB
@Thickness 0.125 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	<= 0.15 %	<= 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			
Eff. thermal diffusivity	6.51E-08		[m ² /s]
Injection molding	Yes		
Injection speed	slow		
Processing conditions acc. ISO	9988		