

Celanese Hostaform® C 9021 GV3/30

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

Physical Properties	Metric	English	Comments
Density	1.59 g/cc	0.0574 lb/in ³	ISO 1183
Density of Compound	1.37 g/cc	0.0495 lb/in ³	
Water Absorption at Saturation	0.90 %	0.90 %	ISO 62
Melt Flow	7.5 g/10 min @Load 2.16 kg, Temperature 190 °C	7.5 g/10 min @Load 4.76 lb, Temperature 374 °F	[cm ³ /10min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	38.0 MPa	5510 psi	50mm/min; ISO 527-2/1A
Elongation at Break	12 %	12 %	
Elongation at Yield	6.0 %	6.0 %	50mm/min; ISO 527-2/1A
Tensile Modulus	3.90 GPa	566 ksi	50mm/min; ISO 527-2/1A
Flexural Modulus	3.50 GPa	508 ksi	ISO 178
Charpy Impact Unnotched	4.00 J/cm ²	19.0 ft-lb/in ²	ISO 179/1eU
	4.00 J/cm ² @Temperature -30.0 °C	19.0 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.300 J/cm ²	1.43 ft-lb/in ²	ISO 179/1eA
	0.300 J/cm ² @Temperature -30.0 °C	1.43 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	3300 MPa	479000 psi	ISO 899-1
Tensile Creep Modulus, 1000 hours	2100 MPa	305000 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	4.5	4.5	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	5.0	5.0	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	40.0 kV/mm	1020 kV/in	IEC 60243-1
Dissipation Factor	0.0080	0.0080	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	0.030	0.030	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-2
CTE, linear, Transverse to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-2
Specific Heat Capacity	1.78 J/g-°C	0.425 BTU/lb-°F	

Thermal Conductivity	0.225 W/m-K	1.56 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)	112 °C	234 °F	ISO 75-1, -2
Flammability, UL94	HB @Thickness 1.57 mm	HB @Thickness 0.0618 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	<= 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	70 rpm	
	@Diameter 55.0 mm	@Diameter 2.17 in	
	100 rpm	100 rpm	
	@Diameter 40.0 mm	@Diameter 1.57 in	
	150 rpm	150 rpm	
	@Diameter 25.0 mm	@Diameter 0.984 in	

Descriptive Properties			
Eff. thermal diffusivity		7.3E-08	[m ² /s]
Injection molding		Yes	
Injection speed		slow	
Processing conditions acc. ISO		9988	