

# Celanese Hostaform<sup>®</sup> C 9021 K

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

Physical Properties	Metric	English	Comments
Density	1.44 g/cc	0.0520 lb/in <sup>3</sup>	ISO 1183
Density of Compound	1.23 g/cc	0.0444 lb/in <sup>3</sup>	
Water Absorption at Saturation	0.65 %	0.65 %	ISO 62
Linear Mold Shrinkage, Flow	0.020 cm/cm	0.020 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.018 cm/cm	0.018 in/in	ISO 294-4
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 <sup>3</sup> /10min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	60.0 MPa	8700 psi	50mm/min; ISO 527-2/1A
Elongation at Break	22 %	22 %	
Elongation at Yield	8.0 %	8.0 %	50mm/min; ISO 527-2/1A
Tensile Modulus	3.00 GPa	435 ksi	50mm/min; ISO 527-2/1A
Flexural Modulus	2.90 GPa	421 ksi	ISO 178
Charpy Impact Unnotched	10.0 J/cm <sup>2</sup>	47.6 ft-lb/in <sup>2</sup>	ISO 179/1eU
	10.0 J/cm <sup>2</sup> @Temperature -30.0 °C	47.6 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	0.500 J/cm <sup>2</sup>	2.38 ft-lb/in <sup>2</sup>	ISO 179/1eA
	0.500 J/cm <sup>2</sup> @Temperature -30.0 °C	2.38 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	2500 MPa	363000 psi	ISO 899-1
Tensile Creep Modulus, 1000 hours	1400 MPa	203000 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	4.2 @Frequency 1e+6 Hz	4.2 @Frequency 1e+6 Hz	IEC 60250
	4.2 @Frequency 100 Hz	4.2 @Frequency 100 Hz	IEC 60250
Dielectric Strength	35.0 kV/mm	889 kV/in	IEC 60243-1
Dissipation Factor	0.0025 @Frequency 100 Hz	0.0025 @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	110 µm/m-°C	61.1 µin/in-°F	ISO 11359-2
Specific Heat Capacity	2.06 J/g-°C	0.492 BTU/lb-°F	

Thermal Conductivity	0.195 W/m-K	1.35 BTU-in/hr-ft <sup>2</sup> -°F	
Melting Point	166 °C	331 °F	10°C/min; ISO 11357-1,-2,-3
Deflection Temperature at 1.8 MPa (264 psi)	100 °C	212 °F	ISO 75-1, -2
Flammability, UL94	HB @Thickness 1.57 mm	HB @Thickness 0.0618 in	
	HB @Thickness 3.18 mm	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	