

Hostaform® C 9021 K

Acetal (POM) Copolymer

Celanese Corporation

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

Injection molding type like C 9021; with special chalk modified

Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 29988- POM-K, M-GNR, 03-002, K5 POM copolymer Injection molding type, with special chalk modified; good wear properties; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation. UL-registration in natural and a thickness more than 1.57 mm as UL 94 HB, temperature index UL 746 B electrical 105 °C, mechanical 90 °C (tensile impact) and 80 °C (tensile). Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1 mm. Ranges of applications: for unlubricated or once-only-lubricant sliding Parts. FMVSS = Federal Motor Vehicle Safety Standard (USA) UL = Underwriters Laboratories (USA)

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
UL Yellow Card ²	• E42337-234619
Search for UL Yellow Card	• Celanese Corporation • Hostaform®
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Additive	• Mold Release
Features	• Drinking Water Contact Acceptable • Low Friction • Wear Resistant
Uses	• Automotive Applications
Forms	• Pellets
Processing Method	• Extrusion • Injection Molding
Multi-Point Data	• Creep Modulus vs. Time (ISO 11403) • Isochronous Stress vs. Strain (ISO 11403) • Isothermal Stress vs. Strain (ISO 11403) • Secant Modulus vs. Strain (ISO 11403) • Shear Stress vs. Shear Rate (ISO 11403) • Viscosity vs. Shear Rate (ISO 11403)

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.44 g/cm ³	1.44 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	7.5 cm ³ /10min	7.5 cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.8 %	1.8 %	
Flow	2.1 %	2.1 %	
Water Absorption			ISO 62
Saturation, 73°F (23°C), 0.0787 in (2.00 mm)	0.65 %	0.65 %	
Equilibrium, 73°F (23°C), 0.0787 in (2.00 mm), 50% RH	0.20 %	0.20 %	

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	435000 psi	3000 MPa	ISO 527-1
Tensile Stress (Yield)	8700 psi	60.0 MPa	ISO 527-2/50
Tensile Strain (Yield)	8.0 %	8.0 %	ISO 527-2/50
Nominal Tensile Strain at Break	22 %	22 %	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	363000 psi	2500 MPa	
1000 hr	203000 psi	1400 MPa	
Flexural Modulus	421000 psi	2900 MPa	ISO 178



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Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	2.4 ft·lb/in ²	5.0 kJ/m ²	
73°F (23°C)	2.4 ft·lb/in ²	5.0 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	48 ft·lb/in ²	100 kJ/m ²	
73°F (23°C)	48 ft·lb/in ²	100 kJ/m ²	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness (H 358/30)	21000 psi	145 MPa	ISO 2039-1
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ISO 75-2/A
264 psi (1.8 MPa), Unannealed	212 °F	100 °C	
Vicat Softening Temperature	302 °F	150 °C	ISO 306/B50
Melting Temperature ⁴	331 °F	166 °C	ISO 11357-3
CLTE - Flow	6.1E-5 in/in/°F	1.1E-4 cm/cm/°C	ISO 11359-2
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	1.0E+14 ohms	1.0E+14 ohms	IEC 62631-3-2
Volume Resistivity	1.0E+12 ohms·m	1.0E+12 ohms·m	IEC 62631-3-1
Electric Strength	890 V/mil	35 kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.20	4.20	
1 MHz	4.20	4.20	
Dissipation Factor			IEC 60250
100 Hz	2.5E-3	2.5E-3	
1 MHz	6.0E-3	6.0E-3	
Comparative Tracking Index (CTI) ⁵	PLC 0	PLC 0	UL 746A
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.06 in (1.6 mm)	HB	HB	
0.13 in (3.2 mm)	HB	HB	
Fill Analysis	Nominal Value (English)	Nominal Value (SI)	Test Method
Melt Density	1.23 g/cm ³	1.23 g/cm ³	Internal Method
Melt Specific Heat	0.492 Btu/lb/°F	2060 J/kg/°C	Internal Method
Melt Thermal Conductivity	1.4 Btu·in/hr/ft ² /°F	0.20 W/m/K	Internal Method
Ejection Temperature	284 °F	140 °C	
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	212 to 248 °F	100 to 120 °C	
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr	
Suggested Max Moisture	0.15 %	0.15 %	
Hopper Temperature	68 to 86 °F	20 to 30 °C	
Injection Feed Temperature	140 to 176 °F	60 to 80 °C	
Rear Temperature	338 to 356 °F	170 to 180 °C	
Middle Temperature	356 to 374 °F	180 to 190 °C	
Front Temperature	374 to 392 °F	190 to 200 °C	
Injection Zone 4 Temperature	374 to 410 °F	190 to 210 °C	



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Injection	Nominal Value (English)	Nominal Value (SI)
Nozzle Temperature	374 to 410 °F	190 to 210 °C
Processing (Melt) Temp	374 to 410 °F	190 to 210 °C
Mold Temperature	176 to 248 °F	80 to 120 °C
Injection Rate	Slow	Slow
Back Pressure	< 290 psi	< 2.00 MPa
Hot Runner	374 to 410 °F	190 to 210 °C
Screw Speed		
0.98 in (2.50 cm)	150	150
1.6 in (4.00 cm)	100	100
2.2 in (5.50 cm)	70	70

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ 10°C/min

⁵ 23°C



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Where to Buy

Supplier

Celanese Corporation

Florence, Florence USA

Telephone: 800-833-4882

Web: <https://www.celanese.com/>

Distributor

Channel Prime Alliance

Telephone: 800-247-8038

Web: <http://www.channelpa.com/>

Availability: North America

Entec Polymers

Telephone: 833-319-0299

Web: https://www.entecpolymers.com/?utm_source=ul&utm_medium=paid%20association&utm_campaign=entec%20%7C%20entec%201&utm_term=ul%20%7C%20where%20to%20buy

Availability: North America

Entec Polymers Latin America

Contact Entec Polymers for availability of individual products by country.

Web: <https://www.entecpolymers.com/>

Availability: Latin America

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