



Hostaform® C 27021

Celanese Corporation - Acetal (POM) Copolymer

Saturday, November 2, 2019

General Information

Product Description

Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 9988- POM-K, M-GNR, 05-002 POM copolymer Very easy flowing Injection molding type with high rigidity and hardness; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation. Monomers and additives are listed in EU-Regulation (EU) 10/2011 FDA compliant according to 21 CFR 177.2470 UL-registration for all colours and a thickness more than 1.5 mm as UL 94 HB, temperature index UL 746 B electrical 110°C, mechanical 90°C. Burning rate ISO 3795 and FMVSS 302 < 75 mm/min for a thickness more than 1 mm.

Ranges of applications: thin-walled molded parts with unfavourable flow-path-wall thickness relation; multicavity moulds; complicated precision molded parts; short cycle time. FDA = Food and Drug Administration (USA) FMVSS = Federal Motor Vehicle Safety Standard (USA) UL = Underwriters Laboratories (USA)

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Alkali Resistant • Chemical Resistant • Fast Molding Cycle	• Fuel Resistant • Good Flow • High Hardness	• High Stiffness • Hydrolysis Resistant • Solvent Resistant
Uses	• Thin-walled Parts		
Agency Ratings	• EU 10/2011	• FDA 21 CFR 177.2470	
RoHS Compliance	• Contact Manufacturer		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• POM		

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density	1.41	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	24	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.8	%	
Flow	1.9	%	
Water Absorption (Saturation, 73°F)	0.65	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	421000	psi	ISO 527-2/1A
Tensile Stress (Yield)	9430	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	7.5	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	17	%	ISO 527-2/1A/50
Tensile Creep Modulus (1 hr)	363000	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	189000	psi	ISO 899-1
Flexural Modulus (73°F)	406000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.6	ft·lb/in ²	
73°F	2.6	ft·lb/in ²	

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Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	81	ft·lb/in ²	
73°F	81	ft·lb/in ²	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness ²	21300	psi	ISO 2039-1
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	223	°F	ISO 75-2/A
Vicat Softening Temperature	304	°F	ISO 306/B50
Melting Temperature ³	331	°F	ISO 11357-3
CLTE - Flow	6.1E-5	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+14	ohms·cm	IEC 60093
Electric Strength	890	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.00		
1 MHz	4.00		
Dissipation Factor			IEC 60250
100 Hz	2.5E-3		
1 MHz	5.0E-3		
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.06 in	HB		
0.12 in	HB		
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.20	g/cm ³	Internal Method
Melt Thermal Conductivity	1.1	Btu·in/hr/ft ² /°F	Internal Method
Ejection Temperature	284	°F	
Specific Heat Capacity of Melt	0.528	Btu/lb/°F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212 to 248	°F
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Hopper Temperature	68 to 86	°F
Rear Temperature	338 to 356	°F
Middle Temperature	356 to 374	°F
Front Temperature	374 to 392	°F
Nozzle Temperature	374 to 410	°F
Processing (Melt) Temp	374 to 410	°F
Mold Temperature	176 to 248	°F
Injection Rate	Slow-Moderate	
Back Pressure	< 580	psi

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Injection Notes

Feeding zone temperature: 60 to 80°C

Zone4 temperature: 190 to 210°C

Hot runner temperature: 190 to 210°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² 30s

³ 10°C/min