CELCON® F10-03HM

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- A stiffness-improved (high-viscosity) grade for general injection molding.
- Features greater stiffness compared to general POM copolymer.
- Improved resistance to heat, high humidity, hot water

Product information

Resin Identification	POM		ISO 1043
Part Marking Code	>POM<		ISO 11469

Rheological properties

Melt mass-flow rate	3	g/10min	ISO 1133
Melt mass-flow rate, Temperature	374	°F	
Melt mass-flow rate, Load	4.76	lb	
Molding shrinkage, parallel	2.0	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	399000	psi	ISO 527-1/-2
Tensile stress at yield, 50mm/min	9700	psi	ISO 527-1/-2
Tensile strain at yield, 50mm/min	12	%	ISO 527-1/-2
Nominal strain at break	34	%	ISO 527-1/-2
Flexural modulus	377000	psi	ISO 178
Flexural strength	13100	psi	ISO 178
Charpy notched impact strength, 23°C	3.95	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	3	ftlb/in²	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	338	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	212	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.67	E-4/°F	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.0315	in	IEC 60695-11-10

Electrical properties

Volume resistivity	1E12	Ohm.m	IEC 62631-3-1
Surface resistivity	1E16	Ohm	IEC 62631-3-2
Electric strength	483	kV/in	IEC 60243-1

Physical/Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Density	0.0509	lb/in³	ISO 1183

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Injection

Drying Recommended	no	
Drying Temperature	212	°F
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	383	°F
Min. melt temperature	356	°F
Max. melt temperature	410	°F
Max. screw tangential speed	≤0.3	m/s
Mold Temperature Optimum	158	°F
Min. mold temperature	140	°F
Max. mold temperature	176	°F
Hold pressure range	8700 - 17400	psi
Hold Pressure Time (h is the max. wall thickness of the part in mm)	$2h^2$-3	s
Back pressure	290	psi

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
General Motors	GMW22P-POM-C1	N/A

Characteristics

Processing	Injection Molding, Extrusion, Sheet Extrusion, Other Extrusion
Special characteristics	High viscosity

Additional information

Injection molding

Processing

mold temperature: 60°C ~ 80°C (140°F ~ 176°F)
barrel temperature: 170°C ~ 210°C (338°F ~ 410°F)
screw speed: 150mm/s ~ 200mm/s
back pressure: max. 20 bar

Processing Notes

Pre-Drying

It is recommended to dry material at 80°C ~ 90°C (176°F ~ 194°F) for 3h ~ 4h if necessary.
suggest max. moisture: 0.1%

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