CELCON® F20-03

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- A medium-viscosity grade for general injection molding

Product information

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

Rheological properties

Melt mass-flow rate	9	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	9400	psi	ISO 527-1/-2
Tensile strain at yield, 50mm/min	10	%	ISO 527-1/-2
Nominal strain at break	32	%	ISO 527-1/-2
Flexural modulus	370000	psi	ISO 178
Flexural strength	12600	psi	ISO 178
Charpy notched impact strength, 23°C	3.09	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	2.62	ftlb/in²	ISO 179/1eA
Poisson's ratio	0.366		

Thermal properties

Melting temperature, 10°C/min	329	°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

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

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

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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

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
BYD	BYD-TY-D13F05-0043	Ulsan, Korea
BYD	BYD-TY-D13F05-0106	Black, Pyeongtaek,Korea
Dongfeng Motor	Natural, No Spec, Special Part Approval, See Your CE Account Manager.	
Ford	WSK-M4D635-A2	Ulsan, Korea, PTM,ASN 3101
Ford	WSS-M98P14-A3	ASN 9899
Ford	WSS-M98P14-A7	Natural; KEP AMERICAS, ASN 12251
Geely	Q/JLY J7110235B-2018(2)	
General Motors	GMW22P-POM-C2	Black
General Motors	GMW22P-POM-C2	Natural
Hyundai	MS237-09 Type A	Ulsan, Korea
Hyundai	MS941-03 Type M-1	Ulsan, Korea
Mercedes-Benz	DBL5405	Ulsan, Korea
NIO	N-008-0001	Ulsan, Korea
NIO	NIO-SM.51.007-C2	Ulsan, Korea
Renault	EP03-3-S1, Ulsan, Korea, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault	IP13f-S5, Ulsan, Korea, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault	IP13g-S3, Ulsan, Korea, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault	UB03f-S1, Ulsan, Korea, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault	UB15-S21, Ulsan, Korea, No Spec, Special Part Approval, See Your CE Account Manager.	
SKODA	No Spec, Special Part Approval, See Your CE Account Manager.	
Stellantis	MS.502xx / POM-C.2400F.5C.MF	01994_13_00034, CPN1586 BLACK, CPN 1532 NATURAL
Stellantis - Chrysler	MS.50095 / CPN-1586	Black
Tesla	TM-1005-40	Natural, Ulsan, Korea
Tesla	TM-1005-50	Natural, Ulsan, Korea
VW Group	TL 524 76	Ulsan, Korea, reference number 11-Z-10-05969

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Characteristics

Processing	Injection Molding

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