DURACON® CH-20

Polyplastics - Acetal (POM) Copolymer

General Information

Product Description

Elecrtic Conductive

CF20% Reinforced, Low Wear

General

Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight		
Features	• Copolymer	• Electrically Conductive	• Wear Resistant
UL File Number	• E45034		
Forms	• Pellets		
Processing Method	• Injection Molding		
Part Marking Code (ISO 11469)	• >POM-CF20<		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.47	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.5	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	2.0	cm³/10min	ISO 1133
Molding Shrinkage [2]			ISO 294-4
Across Flow : 0.0787 in	0.90	%	
Flow : 0.0787 in	0.30	%	
Water Absorption (24 hr, 73°F, 0.0394 in)	0.90	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2.03E+6	psi	ISO 527-1
Tensile Stress	20900	psi	ISO 527-2
Tensile Strain (Break)	1.5	%	ISO 527-2
Flexural Modulus	1.74E+6	psi	ISO 178
Flexural Stress	29700	psi	ISO 178
Coefficient of Friction			JIS K7218
Dynamic [3]	0.39		
vs. Steel - Dynamic [4]	0.24		
Wear Factor			JIS K7218
71 psi, 59 ft/min [5]	2.5	10^-10 in³·min/ft·lb·hr	
8.7 psi, 30 ft/min [6]	50	10^-10 in³·min/ft·lb·hr	
71 psi, 59 ft/min [7]	150	10^-10 in³·min/ft·lb·hr	
8.7 psi, 30 ft/min [8]	5000	10^-10 in³·min/ft·lb·hr	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	2.4	ft·lb/in²	ISO 179/1eA
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	95		ISO 2039-2

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed	325	°F	
CLTE - Flow (73 to 131°F)	5.6E-6	in/in/°F	Internal Method
CLTE - Transverse (73 to 131°F)	4.4E-5	in/in/°F	Internal Method
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	50	ohms	Internal Method
Volume Resistivity	1.0E+2	ohms·cm	Internal Method
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	HB		UL 94
Additional Information	**Nominal Value**	**Unit**	
Color Number	CD3501		

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176 to 194	°F
Drying Time	3.0 to 4.0	hr
Processing (Melt) Temp	374 to 410	°F
Mold Temperature	140 to 176	°F
Injection Pressure	7250 to 14500	psi
Screw Speed	100 to 150	rpm
Injection Velocity	12 to 118	in/min

Notes

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

[2] 60x60x2mmt, Cavity Pressure 60 MPa

[3] vs M90-44, 0.06 MPa, 15 cm/s

[4] 0.49 MPa, 30 cm/s

[5] Thrust, vs C-Steel, Steel Side

[6] Thrust, vs M90-44, Material Side

[7] Thrust, vs C-Steel, Material Side

[8] Thrust, vs M90-44, M90-44 Side