DURACON® ES-5

Polyplastics - Acetal (POM) Copolymer

General Information

Product Description			
Electric Conductive			
Anti-static			
General			
Filler / Reinforcement	• Carbon Powder, 5.0% Filler by Weight		
Additive	• Antistatic		
Features	• Antistatic	• Copolymer	• Electrically Conductive
Forms	• Pellets		
Processing Method	• Injection Molding		
Part Marking Code (ISO 11469)	• >POM-CD5<		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.41	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	9.0	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	8.0	cm³/10min	ISO 1133
Molding Shrinkage [2]			ISO 294-4
Across Flow : 0.0787 in	2.1	%	
Flow : 0.0787 in	2.3	%	
Water Absorption (24 hr, 73°F, 0.0394 in)	1.3	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	413000	psi	ISO 527-1
Tensile Stress	7110	psi	ISO 527-2
Tensile Strain (Break)	7.5	%	ISO 527-2
Flexural Modulus	377000	psi	ISO 178
Flexural Stress	12200	psi	ISO 178
Coefficient of Friction [3] (vs. Steel - Dynamic)	0.40		JIS K7218
Wear Factor			JIS K7218
71 psi, 59 ft/min [4]	< 0.50	10^-10 in³·min/ft·lb·hr	
71 psi, 59 ft/min [5]	290	10^-10 in³·min/ft·lb·hr	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	1.4	ft·lb/in²	ISO 179/1eA
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	90		ISO 2039-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed	228	°F	
CLTE - Flow (73 to 131°F)	6.1E-5	in/in/°F	Internal Method
CLTE - Transverse (73 to 131°F)	6.1E-5	in/in/°F	Internal Method

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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	5.0E+2	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	CD3502		

Notes

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

[2] 60×60×2mmt, Cavity Pressure 60 MPa

[3] vs C-Steel, pressure 0.49MPa, 30cm/s

[4] vs C-Steel, steel side

[5] vs C-Steel, material side