DURACON® M90-57

Polyplastics - Acetal (POM) Copolymer

General Information

Product Description		
Food Contact Safety, Multi-national Certification of Drinkingwater Safety		
Standard		
General		
Features	• Copolymer	• Food Contact Acceptable
Uses	• Potable Water Applications	
UL File Number	• E45034	
Forms	• Pellets	
Processing Method	• Injection Molding	
Part Marking Code (ISO 11469)	• >POM<	

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	2.3	%	
Flow : 0.0787 in	2.2	%	
Water Absorption (24 hr, 73°F, 0.0394 in)	0.50	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	392000	psi	ISO 527-1
Tensile Stress	9570	psi	ISO 527-2
Nominal Tensile Strain at Break	35	%	ISO 527-2
Flexural Modulus	363000	psi	ISO 178
Flexural Stress	12800	psi	ISO 178
Coefficient of Friction [3] (vs. Steel - Dynamic)	0.40		JIS K7218
Wear Factor			
140 psi, 59 ft/min [4]	< 0.50	10^-10 in³·min/ft·lb·hr	JIS K7218
140 psi, 59 ft/min [5]	40	10^-10 in³·min/ft·lb·hr	JIS K7218
8.7 psi, 30 ft/min [6]	500	10^-10 in³·min/ft·lb·hr	JIS K7218
8.7 psi, 30 ft/min [7]	6000	10^-10 in³·min/ft·lb·hr	ASTM D3702
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	4.3	ft·lb/in²	ISO 179/1eA
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	86		ISO 2039-2

DURACON® M90-57

Polyplastics - Acetal (POM) Copolymer

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed	203	°F	
CLTE - Flow (73 to 131°F)	6.7E-5	in/in/°F	Internal Method
CLTE - Transverse (73 to 131°F)	6.7E-5	in/in/°F	Internal Method
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity	1.0E+14	ohms·cm	IEC 60093
Electric Strength (0.118 in)	480	V/mil	IEC 60243-1
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	HB		UL 94
Additional Information	**Nominal Value**	**Unit**	
Color Number	WK2001		

Notes

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

[2] 60x60x2mmt, Cavity Pressure 60 MPa

[3] vs C-Steel, pressure 0.98MPa, 30cm/s

[4] vs C-Steel, steel side

[5] vs C-Steel, material side

[6] vs M90-44, material side

[7] vs M90-44, M90-44 side