

DURACON® M90-57

Polyplastics - Acetal (POM) Copolymer

General Information

Product Description

Food Contact Safety, Multi-national Certification of Drinkingwater Safety

Standard

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
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/cm ³	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	cm ³ /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 in ³ ·min/ft·lb·hr	JIS K7218
140 psi, 59 ft/min ⁵	40	10 ⁻¹⁰ in ³ ·min/ft·lb·hr	JIS K7218
8.7 psi, 30 ft/min ⁶	500	10 ⁻¹⁰ in ³ ·min/ft·lb·hr	JIS K7218
8.7 psi, 30 ft/min ⁷	6000	10 ⁻¹⁰ in ³ ·min/ft·lb·hr	ASTM D3702
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	4.3	ft·lb/in ²	ISO 179/1eA
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	86		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	203	°F	ISO 75-2/A
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	Test Method
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

