

DURACON® TW-51

Acetal (POM) Copolymer + PE

Polyplastics Co., Ltd.

Message:

High Sliding, High Rigidity, Low Warpage

General Information			
Features	Low friction coefficient		
	Low warpage		
	Rigidity, high		
UL File Number	E45034		
Forms	Particle		
Processing Method	Injection molding		
Part Marking Code (ISO 11469)	>POM+PE-MD30		
Physical	Nominal Value	Unit	Test Method
Density	1.54	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.0	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	2.20	cm ³ /10min	ISO 1133
Water Absorption (23°C, 24 hr)	0.50	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	50		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	4850	MPa	ISO 527-2
Tensile Stress	40.0	MPa	ISO 527-2
Tensile Strain (Break)	4.0	%	ISO 527-2
Flexural Modulus	4450	MPa	ISO 178
Flexural Stress	72.0	MPa	ISO 178
Coefficient of friction-Dynamic			JIS K7218
-- 1	0.280		JIS K7218
-- 2	0.210		JIS K7218
Color Number	CF2001		
Specific Wear			JIS K7218
-- 3		10 ⁻³ mm ³ /N·km	JIS K7218
-- 4	3.00	10 ⁻³ mm ³ /N·km	JIS K7218
-- 5	3.00	10 ⁻³ mm ³ /N·km	JIS K7218
-- 6	0.700	10 ⁻³ mm ³ /N·km	JIS K7218
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	2.0	kJ/m ²	ISO 179/1eA

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	90.0	°C	ISO 75-2/A
Linear thermal expansion coefficient			Internal method
Flow: 23 to 55°C	9.0E-5	cm/cm/°C	Internal method
Lateral: 23 to 55°C	9.0E-5	cm/cm/°C	Internal method
Flammability	Nominal Value		Test Method
Flame Rating	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	80.0 - 90.0	°C	
Drying Time	3.0 - 4.0	hr	
Processing (Melt) Temp	190 - 210	°C	
Mold Temperature	60.0 - 80.0	°C	
Injection Pressure	49.0 - 98.0	MPa	
Screw Speed	100 - 150	rpm	
Injection instructions			
Injection Speed: 5-50mm/s (0.3-3m/min)Molding Cycle: Injection Holding Pressure: Gate sealing time + alpha Cooling: Plasticizing time or ejection capable time			
NOTE			

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|----|---|
| 1. | vs C-Steel, pressure 0.98MPa, 30cm/s |
| 2. | vs M90-44, pressure0.06MPa, 15cm/s |
| 3. | vs C-Steel, steel side, pressure 0.98MPa, 30cm/s |
| 4. | vs M90-44, material side, pressure 0.06MPa, 15cm/s |
| 5. | vs M90-44, M90-44 side, pressure 0.06MPa, 15cm/s |
| 6. | vs C-Steel, material side, pressure 0.98MPa, 30cm/s |

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