

POKETONE® M63AS1B

General

Feature	Lubricated injection general purpose injection molding grade
Special Characteristics	Excellent wear resistance, Low NVH
Processing method	Injection molding
Certification	RoHs, Free of PAHs, Free of Halogen, SVHC
Colors available	Natural
UL File number	-
Form	Pellet
Applications	Gear, Roller

Physical Properties

	ASTM	Value	ISO	Value
Density	D792	1.24 g/cm ³	1183	1.24 g/cm ³
Shore D hardness	D2240		868	68
Hardness Rockwell	D785	109	2039	
Water absorption equilibrium at RH 50%	D570	0.6 %	62	0.6 %
Water absorption at Saturation	D570	2.3 %	62	2.3 %
Melt flow index 240°C/2.16kg	D1238	5.7 g/10 min	1133	5.3 ml/10 min
Mold Shrinkage	D955		294-4	
	MD, 3 mm	1.5 %		
	TD, 3 mm	1.6 %		
	MD, 2 mm			
	TD, 2 mm			

Mechanical Properties

	ASTM	Value	ISO	Value
Tensile strength at yield	D638	55 MPa	527-1	58 MPa
Tensile modulus	D638	1,400 MPa	527-1	1,300 MPa
Tensile elongation at yield	D638		527-1	
Tensile elongation at break	D638	200 %	527-1	200 %
Flexural strength	D790	55 MPa	178	55 MPa
Flexural modulus	D790	1,300 MPa	178	1,300 MPa
Unnotched Izod impact strength	D256		180/1U	
Notched Izod impact strength	D256	122 J/m	180/1A	14 kJ/m ²

Unnotched Charpy impact strength	D6110	179/1eU	
Notched Charpy impact strength	D6110	179/1eA	16 kJ/m ²
Falling dart impact strength		6603-2	

Thermal Properties	ASTM	Value	ISO	Value
Melting temperature	D3418	222 °C	11357	222 °C
Coefficient of linear thermal expansion, 25 ~ 55°C	E831 TD MD	1.0×10 ⁻⁴ 1.0×10 ⁻⁴	11359	
Vicat softening point	D1525 5 kg	190 °C	306/B50 50 N	190 °C
Heat deflection temperature	D648 66 psi 264 psi	190 °C 100 °C	75 0.45 MPa 1.8 MPa	185 °C 82 °C

Wear & Abrasion Resistance	Pin on Disk	Thrust Washer
* Condition	1.3 MPa, 0.06 m/sec	0.4 MPa, 0.12 m/sec
Dynamic coefficient of Friction against self		
Dynamic coefficient of Friction against steel		
Wear factor against self		
Wear factor against steel		
Taber abrasion 1kg load, CS-17 wheel	ASTM D1044	

Electrical Properties	Test Method & Condition	Value
	ASTM D149	
Dielectric Strength (DS)	3 mm 2 mm	16 kV/mm 20 kV/mm
Volume Resistivity (VR)	ASTM D257	10 ¹⁴ Ω-cm
Surface Resistivity (SR)	ASTM D257	10 ¹⁷ Ω/m ²
Dielectric constant at 60Hz	ASTM D150	6.3
Dissipation factor at 60Hz	ASTM D150	0.013

Injection Molding Processing Conditions	Value
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Pre-drying	Drying temperature	80 °C
	Drying time	3 ~ 4 hr
	Suggested max moisture	0.20 %
Temperature	Nozzle temperature	240 °C
	Zone 1 temperature	230 °C
	Zone 2 temperature	220 °C
	Zone 3 temperature	215 °C
	Zone 4 temperature	210 °C
	Processing temperature	225 ~ 240 °C
	Mold temperature	80 °C
Pressure	Back pressure	0.294 ~ 0.686 MPa
Speed	Screw Speed	50 ~ 100 rpm

* The data listed here is not for specification warranty, but typical value.

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