

POKETONE® M33AT2E

General

Feature	Lubricated high-flow injection molding grade
Special Characteristics	Excellent wear resistance, Low NVH
Processing method	Injection molding
Certification	-
Colors available	Natural
UL File number	-
Form	Pellet
Applications	Gear

Physical Properties

	ASTM	Value	ISO	Value
Density	D792	1.29 g/cm ³	1183	1.29 g/cm ³
Shore D hardness	D2240		868	
Hardness Rockwell	D785		2039	
Water absorption equilibrium at RH 50%	D570		62	
Water absorption at Saturation	D570		62	
Melt flow index 240°C/2.16kg	D1238	20 g/10 min	1133	
	D955		294-4	
Mold Shrinkage	MD, 3 mm	1.9%		
	TD, 3 mm	1.8%		
	MD, 2 mm			
	TD, 2 mm			

Mechanical Properties

	ASTM	Value	ISO	Value
Tensile strength at yield	D638	50 MPa	527-1	
Tensile modulus	D638		527-1	
Tensile elongation at yield	D638	40 %	527-1	
Tensile elongation at break	D638		527-1	
Flexural strength	D790	52 MPa	178	
Flexural modulus	D790	1,530 MPa	178	
Unnotched Izod impact strength	D256		180/1U	
Notched Izod impact strength	D256	87 J/m	180/1A	
Unnotched Charpy impact strength	D6110		179/1eU	

Notched Charpy impact strength	D6110	179/1eA	9 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		11359	
Vicat softening point	D1525 5 kg		306/B50 50 N	
Heat deflection temperature	D648 66 psi 264 psi		75 0.45 MPa 1.8 MPa	95°C 200°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		0.09
Wear factor against self		
Wear factor against steel		0.0004mm/kgf/cm ²
Taber abrasion 1kg load, CS-17 wheel	ASTM D1044	

Injection Molding Processing Conditions

	Value
Drying temperature	80 °C
Pre-drying	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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