

POKETONE® M33FG4A

Description

20% glass-reinforced injection molding grade

US FDA food contact compliance and NSF 61 NSI/CAN drinking water certificate on cold and hot water

Physical Properties

	ASTM	Value	ISO	Value
Density	D792	1.39 g/cm ³	1183	1.39 g/cm ³
Shore D hardness	D2240		868	80
Hardness Rockwell	D785	111	2039	
Water absorption equilibrium at RH 50%	D570	0.4 %	62	0.4 %
Water absorption at Saturation	D570	1.8 %	62	1.8 %
Melt flow index 240°C/2.16kg	D1238	22 g/10 min	1133	
	D955		294-4	
Mold Shrinkage	MD, 3 mm	0.3 %		
	TD, 3 mm	1.2 %		
	MD, 2 mm	0.3 %		
	TD, 2 mm	1.0 %		

Mechanical Properties

	ASTM	Value	ISO	Value
Tensile strength at yield	D638	107 MPa	527-1	
Tensile modulus	D638		527-1	
Tensile elongation at yield	D638		527-1	
Tensile elongation at break	D638	4.0 %	527-1	
Flexural strength	D790	150 MPa	178	
Flexural modulus	D790	4,700 MPa	178	
Unnotched Izod impact strength	D256		180/1U	
Notched Izod impact strength	D256		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		11359	
Vicat softening point	D1525		306/B50	
	5 kg	207 °C	50 N	207 °C
Heat deflection temperature	D648		75	
	66 psi	215 °C	0.45 MPa	215 °C
	264 psi	210 °C	1.8 MPa	205 °C

Electrical Properties

	Test Method & Condition	Value
Dielectric Strength (DS)	ASTM D149	
	3 mm	
	2 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	6.1
Dissipation factor at 60Hz	ASTM D150	0.011

Injection Molding Processing Conditions

		Value
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	60 ~ 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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