

POKETONE® M33FG3A

Description

15% glass-reinforced high-flow injection molding grade (Food Contact)

Physical Properties

	ASTM	Value	ISO	Value
Density	D792	1.35 g/cm ³	1183	1.35 g/cm ³
Shore D hardness	D2240		868	79
Hardness Rockwell	D785	110	2039	
Water absorption equilibrium at RH 50%	D570	0.5 %	62	0.5 %
Water absorption at Saturation	D570	1.9 %	62	1.9 %
Melt flow index 240°C/2.16kg	D1238	24 g/10 min	1133	22 ml/10 min
Mold Shrinkage	D955		294-4	
	MD, 3 mm	0.4 %		
	TD, 3 mm	1.3 %		
	MD, 2 mm	0.4 %		
	TD, 2 mm	1.1 %		

Mechanical Properties

	ASTM	Value	ISO	Value
Tensile strength at yield	D638	100 MPa	527-1	100 MPa
Tensile modulus	D638	4,100 MPa	527-1	4,050 MPa
Tensile elongation at yield	D638		527-1	
Tensile elongation at break	D638	6.0 %	527-1	6.0 %
Flexural strength	D790	140 MPa	178	135 MPa
Flexural modulus	D790	4,000 MPa	178	3,400 MPa
Unnotched Izod impact strength	D256		180/1U	70 kJ/m ²
Notched Izod impact strength	D256	85 J/m	180/1A	9 kJ/m ²
Unnotched Charpy impact strength	D6110		179/1eU	N.B.
Notched Charpy impact strength	D6110		179/1eA	10 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	8.5×10 ⁻⁵	11359	
	MD	4.6×10 ⁻⁵		
Vicat softening point	D1525		306/B50	
	5 kg	205 °C	50 N	205 °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	21 kV/mm
	2 mm	23 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	6.0
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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