

POKETONE® M13FA7Y

General

Feature	Flame retarded, 30% Glass-reinforced high-flow injection molding grade
Special Characteristics	Free of halogen, High GWP, Flame retardancy(1.6mm V-1)
Processing method	Injection molding
Certification	UL-94(1.6mm V-1)
Colors available	Natural
UL File number	E163907
Form	Pellet
Applications	BUSBAR

Physical Properties

	ASTM	Value	ISO	Value
Density	D792	1.46 g/cm ³	1183	1.46 g/cm ³
Shore D hardness	D2240		868	
Hardness Rockwell	D785		2039	
Water absorption equilibrium at RH 50%	D570	0.4 %	62	0.4 %
Water absorption at Saturation	D570	1.7 %	62	1.7 %
Melt flow index 240°C/2.16kg	D1238	40 g/10 min	1133	27.4 ml/min
	D955		294-4	
	MD, 3 mm			
	TD, 3 mm			
Mold Shrinkage	MD, 2 mm	0.4 %		
	TD, 2 mm	1.0 %		
	MD, 1 mm			
	TD, 1 mm			

Mechanical Properties

	ASTM	Value	ISO	Value
Tensile strength at yield	D638	135 MPa	527-1	
Tensile modulus	D638		527-1	
Tensile elongation at yield	D638		527-1	
Tensile elongation at break	D638	3.0 %	527-1	
Flexural strength	D790	192 MPa	178	
Flexural modulus	D790	7,800 MPa	178	
Notched Izod impact strength	D256	120 J/m	180/1A	

Notched Charpy impact strength	D6110	179/1eA	12 kJ/m ²
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Thermal Properties	ASTM	Value	ISO	Value
Melting temperature	D3418	222 °C	11357	222 °C
Coefficient of linear thermal expansion, 25°C to 55°C	E831		11359	
Vicat softening point	D1525 5 kg	210 °C	306/B50 50 N	210 °C
Heat deflection temperature	D648 66 psi 264 psi	220 °C 215 °C	75 0.45 MPa 1.8 MPa	220 °C 215 °C

Flammability Properties	Test Method & Condition	Value
Flame resistance	UL 94	V-1 (1.6 mm) V-0 (3.0 mm)
Glow Wire Ignition Temperature (GWIT)	IEC 60695-2-13	
Glow Wire Flammability Index (GWFI)	IEC 60695-2-12	

Electrical Properties	Test Method & Condition	Value
Dielectric Strength (DS)	ASTM D149	
Volume Resistivity (VR)	ASTM D257	10 ¹² Ω-cm
Surface Resistivity (SR)	ASTM D257	10 ¹⁷ Ω/m ²
Dielectric constant at 60Hz	ASTM D150	
Dissipation factor at 60Hz	ASTM D150	
Hot Wire Ignition (HWI)	UL 746A	PLC 1
High Amp Arc Ignition (HAI)	UL 746A	PLC 0
High Volt arc Track Rate (HVTR)	UL 746A	
High voltage, low current Arc Resistance (AR)	ASTM D495	PLC 5
Comparative Tracking Index (CTI)	ASTM D3638	PLC 0

Injection Molding Processing Conditions	Value
Pre-drying	Drying temperature 80 °C
	Drying time 3 ~ 4 hr

Temperature	Suggested max moisture	0.20 %
	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 ~ 120 °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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