

POKETONE® M33AF1Y

Description

Flame retarded (0.4mm V-0), high-flow injection molding grade

Physical Properties	ASTM	Value	ISO	Value
Density	D792	1.25 g/cm ³	1183	1.25 g/cm ³
Shore D hardness	D2240		868	
Hardness Rockwell	D785		2039	
Water absorption equilibrium at RH 50%	D570	0.5 %	62	0.5 %
Water absorption at Saturation	D570	2.0 %	62	2.0 %
Melt flow index 240°C/2.16kg	D1238	35 g/10 min	1133	28 ml/min
Mold Shrinkage	D955		294-4	
	MD, 3 mm	1.3 %		
	TD, 3 mm	1.4 %		
	MD, 2 mm			
	TD, 2 mm			
	MD, 1 mm			
	TD, 1 mm			

Mechanical Properties	ASTM	Value	ISO	Value
Tensile strength at yield	D638	46 MPa	527-1	
Tensile modulus	D638		527-1	
Tensile elongation at yield	D638		527-1	
Tensile elongation at break	D638	35 %	527-1	
Flexural strength	D790	65 MPa	178	
Flexural modulus	D790	1,900 MPa	178	
Notched Izod impact strength	D256	45 J/m	180/A	
Notched Charpy impact strength	D6110		179/1eA	4.5 kJ/m ²

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	185 °C	306/B50	185 °C
	5 kg		50 N	
Heat deflection temperature	D648		75	
	66 psi	190 °C	0.45 MPa	185 °C
	264 psi	110 °C	1.8 MPa	90 °C

Flammability Properties	Test Method & Condition	Value
Flame resistance	UL 94	V-0 (0.4 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 ohm cm
Surface Resistivity (SR)	ASTM D257	10 ¹⁷ ohm/sq
Dielectric constant at 60Hz	ASTM D150	
Dissipation factor at 60Hz	ASTM D150	
Hot Wire Ignition (HWI)	UL 746A	
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
	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

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