POKETONE® M33AG2Y

Description

Flame retarded (0.8mm V-0), 5% glass-reinforced high-flow injection molding grade

Physical Properties	ASTM	Value	ISO	Value
Density	D792	1.29 g/cm^3	1183	1.29 g/cm^3
Shore D hardness	D2240		868	77
Hardness Rockwell	D785	106	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	25 g/10 min	1133	23 ml/10 min
Mold Shrinkage	D955		294-4	
	MD, 3 mm	0.8 %		
	TD, 3 mm	1.1 %		
	MD, 2 mm	0.7 %		
	TD, 2 mm	1.0 %		
	MD, 1 mm	0.7 %		
	TD, 1 mm	0.9 %		

Mechanical Properties	ASTM	Value	ISO	Value
Tensile strength at yield	D638	53 MPa	527-1	53 MPa
Tensile modulus	D638	2,650 MPa	527-1	2,550 MPa
Tensile elongation at yield	D638	12 %	527-1	12 %
Tensile elongation at break	D638	18 %	527-1	18 %
Flexural strength	D790	79 MPa	178	78 MPa
Flexural modulus	D790	2,550 MPa	178	2,200 MPa
Notched Izod impact strength	D256	70 J/m	180/1A	6 kJ/m^2
Notched Charpy impact strength	D6110		179/1eA	6 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	
	MD	7.1×10^{-5}		
	TD	10.1×10^{-5}		
Vicat softening point	D1525	195 °C	306/B50	195 °C
	5 kg		50 N	
Heat deflection temperature	D648		75	
	66 psi	212 °C	0.45 MPa	207 °C
	264 psi	163 °C	1.8 MPa	150 °C

Flammability Properties

	Test Method & Condition	Value
Flame resistance	UL 94	V-0 (0.8 mm)
Glow Wire Ignition Temperature (GWIT)	IEC 60695-2-13	825 °C (0.8 mm)
Glow Wire Flammability Index (GWFI)	IEC 60695-2-12	960 °C (0.8 mm)

Electrical Properties

	Test Method & Condition	Value
Dielectric Strength (DS)	ASTM D149	29 kV/mm
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	5.3
Dissipation factor at 60Hz	ASTM D150	0.014
Hot Wire Ignition (HWI)	UL 746A	PLC 1 (0.8 mm) PLC 0 (1.6 mm)
High Amp Arc Ignition (HAI)	UL 746A	PLC 0
High Volt arc Track Rate (HVTR)	UL 746A	PLC 2
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

* The data listed here is not for specification warranty, but typical value.