

# POKETONE® M33AG6A

## Description

Listed on UL Yellow Card as UL94, UL746A, UL746B  
 30% glass-reinforced high-flow injection molding grade

Physical Properties	ASTM	Value	ISO	Value
Density	D792	1.46 g/cm <sup>3</sup>	1183	1.46 g/cm <sup>3</sup>
Shore D hardness	D2240		868	83
Hardness Rockwell	D785	113	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	14 g/10 min	1133	13 ml/10 min
	D955		294-4	
Mold Shrinkage	MD, 3 mm	0.2 %		
	TD, 3 mm	1.1 %		
	MD, 2 mm	0.1 %		
	TD, 2 mm	0.9 %		

Mechanical Properties	ASTM	Value	ISO	Value
Tensile strength at yield	D638	140 MPa	527-1	140 MPa
Tensile modulus	D638	7,700 MPa	527-1	7,500 MPa
Tensile elongation at break	D638	4 %	527-1	3.8 %
Flexural strength	D790	190 MPa	178	185 MPa
Flexural modulus	D790	6,600 MPa	178	6,150 MPa
Unnotched Izod impact strength	D256		180/1U	104 kJ/m <sup>2</sup> .
Notched Izod impact strength	D256	120 J/m	180/1A	13 kJ/m <sup>2</sup>
Unnotched Charpy impact strength	D6110		179/1eU	N.B.
Notched Charpy impact strength	D6110		179/1eA	12 kJ/m <sup>2</sup>

Thermal Properties	ASTM	Value	ISO	Value
Melting temperature	D3418	222 °C	11357	222 °C
Coefficient of linear thermal expansion, 25 ~ 55°C	E831			
	TD	9.7×10 <sup>-5</sup>	11359	
	MD	2.8×10 <sup>-5</sup>		
Vicat softening point	D1525	210 °C	306/B50	210 °C
	5 kg		50 N	
Heat deflection temperature	D648		75	
	66 psi	215 °C	0.45 MPa	215 °C
	264 psi	210 °C	1.8 MPa	210 °C

Flammability Properties	Test Method & Condition	Value
Flame resistance	UL 94	HB (0.8 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
Hot Wire Ignition (HWI)	UL 746A	PLC 0(3.2mm)
High Amp Arc Ignition (HAI)	UL 746A	PLC 0(0.8mm)
High Volt arc Track Rate (HVTR)	UL 746A	PLC 1
Comparative Tracking Index (CTI)	ASTM D3638	PLC 0
Dielectric constant at 60Hz	ASTM D150	6.3
Dissipation factor at 60Hz	ASTM D150	0.011

Relative Thermal Index (UL 746B)	Thickness	Value
Mechanical Strength	0.8 mm	120 °C
	1.6 mm	120 °C
	3.2 mm	130 °C
Mechanical Impact	0.8 mm	100 °C
	1.6 mm	100 °C
	3.2 mm	115 °C
Electrical Strength	0.8 mm	105 °C
	1.6 mm	105 °C
	3.2 mm	105 °C

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
Pressure	Mold temperature	60 ~ 80 °C
	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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