

POKETONE[®] M33FG4A

General

Feature	20% glass-reinforced injection molding grade
Special Characteristics	Non-toxic, Low GWP
Processing method	Injection molding
Certification	FDA, NSF61, WRAS, RoHs, Free of PAHs, Free of Halogen, SVHC
Colors available	Natural, Black
UL File number	-
Form	Pellet
Applications	-

Physical Properties

	ASTM	Value	ISO	Value
Density	D792	1.39 g/cm ³	1183	1.39 g/cm ³
Shore D hardness	D2240		868	80
Hardness Rockwell	D785	111	2039	
Water absorption equilibrium at RH 50%	D570	0.4 %	62	0.4 %
Water absorption at Saturation	D570	1.8 %	62	1.8 %
Melt flow index 240°C/2.16kg	D1238	22 g/10 min	1133	
	D955		294-4	
Mold Shrinkage	MD, 3 mm	0.3 %		
	TD, 3 mm	1.2 %		
	MD, 2 mm	0.3 %		
	TD, 2 mm	1.0 %		

Mechanical Properties

	ASTM	Value	ISO	Value
Tensile strength at yield	D638	107 MPa	527-1	
Tensile modulus	D638		527-1	
Tensile elongation at yield	D638		527-1	
Tensile elongation at break	D638	4.0 %	527-1	
Flexural strength	D790	150 MPa	178	
Flexural modulus	D790	4,700 MPa	178	
Unnotched Izod impact strength	D256		180/1U	
Notched Izod impact strength	D256		180/1A	
Unnotched Charpy impact strength	D6110		179/1eU	
Notched Charpy impact strength	D6110		179/1eA	9 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		11359	
Vicat softening point	D1525 5 kg	207 °C	306/B50 50 N	207 °C
Heat deflection temperature	D648 66 psi 264 psi	215 °C 210 °C	75 0.45 MPa 1.8 MPa	215 °C 205 °C

Electrical Properties

	Test Method & Condition	Value
Dielectric Strength (DS)	ASTM D149	
	3 mm	
	2 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	6.1
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	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.

All products purchased from or supplied by Hyosung Chemical Corporation are subject to terms and conditions set out in the contract, order acknowledgement and/or bill of loading. Values given above are simply references for representing typical level and do not expressly or impliedly guarantee anything. Neither should it be interpreted as specification limit nor sole criterion for part/tool design that is intended to have a legal binding effect. All other information, including that herein, supplied by Hyosung Chemical is considered accurate but is furnished upon the express condition that the customer shall make its own assessment to determine the product's suitability for a particular purpose. Hyosung Chemical makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will not infringe any patent. Any references in this brochure to "Hyosung Chemical" refer to the collectivity of Hyosung Chemical engaged in the manufacture and sale of chemical products. Particular contracts are entered into by any such company individually and any warranty, representation or any other commitment provided by Hyosung Chemical is the commitment of such individual company only.