

POKETONE® M410F-S

General

Feature	Medium-flow injection molding grade (Food & Water Contact) Monofilament extrusion grade
Special Characteristics	Non-toxic, Low GWP
Processing method	Extrusion/injection
Certification	FDA, EU No.10/2011, GMC Resolution 02/12 & 32/07, EN71-Part3, RoHs, Free of PAHs, Free of Halogen, SVHC
Colors available	Natural
UL File number	-
Form	Pellet
Applications	Toys

Physical Properties

	ASTM	Value	ISO	Value
Density	D792	1.22 g/cm ³	1183	1.22 g/cm ³
Shore D hardness	D2240		868	
Hardness Rockwell	D785		2039	
Water absorption equilibrium at RH 50%	D570		62	
Water absorption at Saturation	D570		62	
Melt flow index 220°C/2.16kg	D1238	35 g/10 min	1133	
	D955		294-4	
Mold Shrinkage	MD, 3 mm	1.7 %		
	TD, 3 mm	1.7 %		
	MD, 2 mm			
	TD, 2 mm			

Mechanical Properties

	ASTM	Value	ISO	Value
Tensile strength at yield	D638	45 MPa	527-1	
Tensile modulus	D638		527-1	
Tensile elongation at yield	D638		527-1	
Tensile elongation at break	D638	≥ 200 %	527-1	≥ 200 %
Flexural strength	D790	45 MPa	178	
Flexural modulus	D790	1,000 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	7.0 kJ/m ²
Falling dart impact strength		6603-2	

Thermal Properties

	ASTM	Value	ISO	Value
Melting temperature	D3418	197 °C	11357	197 °C
Coefficient of linear thermal expansion, 25 ~ 55°C	E831		11359	
Vicat softening point	D1525		306/B50	
	5 kg		50 N	
Heat deflection temperature	D648		75	
	66 psi	155 °C	0.45 MPa	
	264 psi	72 °C	1.8 MPa	

Flammability Properties

	Test Method & Condition	Value
Flame resistance	UL 94	HB (0.8 mm)

Injection Molding Processing Conditions

		Value	Unit
Pre-drying	Drying temperature	80	°C
	Drying time	3 ~ 4	hr
	Suggested max moisture	0.20	%
Temperature	Nozzle temperature	225	°C
	Zone 1 temperature	220	°C
	Zone 2 temperature	215	°C
	Zone 3 temperature	215	°C
	Zone 4 temperature	210	°C
	Processing temperature	210 ~ 220	°C
	Mold temperature	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.

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