

POKETONE® M630F

Description

General-purpose injection molding grade (Food Contact)

Physical Properties	ASTM	Value	ISO	Value
Density	D792	1.24 g/cm ³	1183	1.24 g/cm ³
Shore D hardness	D2240		868	76
Hardness Rockwell	D785	110	2039	
Water absorption equilibrium at RH 50%	D570	0.5 %	62	0.5 %
Water absorption at Saturation	D570	2.1 %	62	2.1 %
Melt flow index 240°C/2.16kg	D1238	6 g/10 min	1133	5.6 ml/10 min
Mold Shrinkage	D955		294-4	
	MD, 3 mm	2.1 %		
	TD, 3 mm	2.1 %		
	MD, 2 mm	1.6 %		
	TD, 2 mm	1.5 %		

Mechanical Properties	ASTM	Value	ISO	Value
Tensile strength at yield	D638	58 MPa	527-1	58 MPa
Tensile modulus	D638	1,450 MPa	527-1	1,350 MPa
Tensile elongation at yield	D638	22 %	527-1	22 %
Tensile elongation at break	D638	≥ 200 %	527-1	≥ 200 %
Flexural strength	D790	53 MPa	178	53 MPa
Flexural modulus	D790	1,350 MPa	178	1,250 MPa
Unnotched Izod impact strength	D256	N.B.	180/1U	N.B.
Notched Izod impact strength	D256		180/1A	
	23 °C	220 J/m	23 °C	15 kJ/m ²
	-10 °C	65 J/m	-10 °C	6 kJ/m ²
	-30 °C	52 J/m	-30 °C	4 kJ/m ²
Unnotched Charpy impact strength	D6110		179/1eU	N.B.
Notched Charpy impact strength	D6110		179/1eA	
			23 °C	17 kJ/m ²
			-10 °C	4 kJ/m ²
			-30 °C	3 kJ/m ²
Falling dart impact strength			6603-2	50 J
			23 °C	

Thermal Properties	ASTM	Value	ISO	Value
Melting temperature	D3418	222 °C	11357	222 °C
Coefficient of linear thermal expansion	E831		11359	
	25 ~ 55°C	1.0×10 ⁻⁴		
Vicat softening point	D1525		306/B50	
	5 kg	192 °C	50 N	190 °C
Heat deflection temperature	D648		75	
	66 psi	195 °C	0.45 MPa	185 °C
	264 psi	102 °C	1.8 MPa	90 °C

Wear & Abrasion Resistance

	Pin on Disk	Thrust Washer
* Condition	1.3 MPa, 0.06 m/sec	0.4 MPa, 0.12 m/sec
Dynamic coefficient of Friction against self	0.21	0.34
Dynamic coefficient of Friction against steel	0.36	0.60
Wear factor against self	0.0074 mm ³ /N·km	0.0044 mm ³ /N·km
Wear factor against steel	0.073 mm ³ /N·km	0.04 mm ³ /N·km
Taber abrasion 1kg load, CS-17 wheel	ASTM D1044	12 mg/1,000 cycle

Flammability Properties

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

Electrical Properties

	Test Method & Condition	Value
Dielectric Strength (DS)	ASTM D149 3 mm	15 kV/mm
	2 mm	19 kV/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	0.009

Injection Molding Processing Conditions

	Value	
Pre-drying	Drying temperature	80 °C
	Drying time	3 ~ 4 hr
	Suggested max moisture	0.20 %
Temperature	Nozzle temperature	250 °C
	Zone 1 temperature	240 °C
	Zone 2 temperature	230 °C
	Zone 3 temperature	225 °C
	Zone 4 temperature	220 °C
	Processing temperature	235 ~ 250 °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.

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.