

POKETONE® M630V

General

Feature	General-purpose injection molding grade (UV reinforced)
Special Characteristics	Good UV resistance, Low GWP
Processing method	Injection molding
Certification	USP Class VI, RoHs, Free of PAHs, Free of Halogen, SVHC
Colors available	Natural
UL File number	-
Form	Pellet
Applications	Roller, agricultural equipment, railway component

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 25 ~ 55°C	1.0×10 ⁻⁴	11359	
Vicat softening point	D1525 5 kg	192 °C	306/B50 50 N	190 °C
Heat deflection temperature	D648 66 psi 264 psi	195 °C 102 °C	75 0.45 MPa 1.8 MPa	185 °C 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
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Dielectric Strength (DS)	ASTM D149	
	3 mm	15 kV/mm
	2 mm	19 kV/mm
Volume Resistivity (VR)	ASTM D257	$10^{14} \Omega\text{-cm}$
Surface Resistivity (SR)	ASTM D257	$10^{17} \Omega/\text{m}^2$
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	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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