

POM | KEPITAL TX-21 | Friction & wear resistance grade

- A friction & wear-resistance(medium-viscosity) grade for general injection molding.
- Suitable for uses requiring reduced wear noise and a good friction and wear resistance without sacrificing mechanical properties.

Physical properties	Test Standard	Unit	Value
Density	ISO 1183	g/cm ³	1.39
Melt flow rate	ISO 1133	g/10min	16
Water absorption(23 °C, 50 %RH)	ISO 62	%	0.2

Thermal properties	Test Standard	Unit	Value
Heat deflection temperature(1.8 MPa)	ISO 75	°C	90
Flammability	UL 94	-	HB
Melting point	ISO 11357	°C	165
Coefficient of linear thermal expansion	ISO 11359	X 10 ⁻⁵ /°C	13

Mechanical properties	Test Standard	Unit	Value
Tensile modulus	ISO 527	MPa	2,500
Tensile stress	ISO 527	MPa	57
Tensile strain at yield	ISO 527	%	10
Nominal strain at break	ISO 527	%	33
Flexural strength	ISO 178	MPa	79
Flexural modulus	ISO 178	MPa	2,350
Charpy impact strength(Notched) @ 23°C	ISO 179/1eA	kJ/m ²	7.5
Charpy impact strength(Notched) @ -30°C	ISO 179/1eA	kJ/m ²	5.0

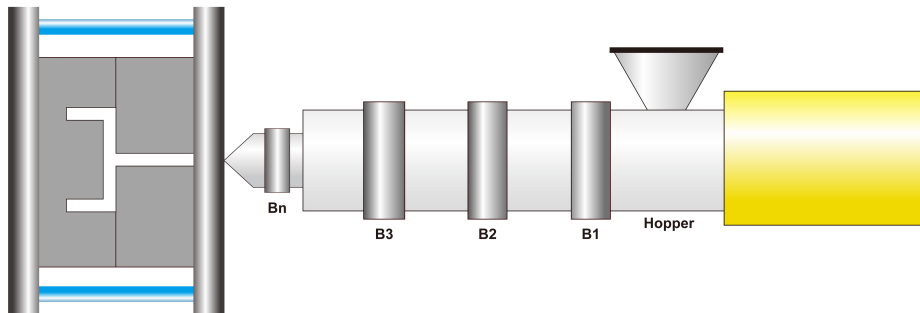
Electrical properties	Test Standard	Unit	Value
Surface resistivity	IEC 60093	Ω	1X10 ¹⁶
Volume resistivity	IEC 60093	Ω/ cm	1X10 ¹⁴
Dielectric strength	IEC 60243-1	kV/mm	-

Other	Test Standard	Unit	Value
Mold shrinkage(flow direction, Φ = 100 mm, t = 3 mm)	KEP Method	%	2.0

General information	Test Standard	Unit	Value
Polymer abbreviation	ISO 1043	-	POM

Revision No : 5 (2019-09-10)

Injection molding condition



Pre-drying (Suggested max. moisture : 0.1%)

It is recommend to dry material at 80°C ~ 90°C(176°F ~ 212°F) for 3 h ~ 4 h if necessary.

Temperature

Mold temperature : 60 °C ~ 80 °C(140 °F ~ 176 °F)

Barrel temperature : 170 °C ~ 210 °C(338 °F ~ 410 °F)

Mold	Bn(Nozzle)	B3(Metering)	B2(Compression)	B1(Feeding)	Hopper
60 ~ 80 °C	180 ~ 210 °C	190 ~ 200 °C	180 ~ 190 °C	170 ~ 180 °C	60 ~ 80 °C
140 ~ 176 °F	356 ~ 410 °F	374 ~ 392 °F	356 ~ 374 °F	338 ~ 356 °F	140 ~ 176 °F

Plastification

Screw speed : 150 mm/s ~ 200 mm/s

Back pressure : Maximum 20 bar

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