

POM | KEPITAL TE-21 | Impact modified grade

- A toughened, medium-viscosity grade for general injection molding
- Suitable for applications requiring high impact resistance and toughness

Physical properties	Test Standard	Unit	Value
Density	ISO 1183	g/cm ³	1.39
Melt flow rate	ISO 1133	g/10min	11
Water absorption(23 °C, 50 %RH)	ISO 62	%	0.22

Thermal properties	Test Standard	Unit	Value
Heat deflection temperature(1.8 MPa)	ISO 75	°C	84
Flammability	UL 94	–	HB
Melting point(10 °C/min)	ISO 11357	°C	165
Coefficient of linear thermal expansion	ISO 11359	X 10 ⁻⁵ /°C	13

Mechanical properties	Test Standard	Unit	Value
Tensile stress	ISO 527	MPa	57
Tensile strain at yield	ISO 527	%	9.0
Nominal strain at break	ISO 527	%	40
Flexural strength	ISO 178	MPa	76
Flexural modulus	ISO 178	MPa	2,150
Charpy impact strength(Notched) @ 23°C	ISO 179/1eA	kJ/m ²	8.0

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	%	1.9

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Injection molding condition



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

It is recommend to dry material at 80°C ~ 100°C(176°F ~ 212°F) for 3 h ~ 4 h if necessary.

Temperature

Mold temperature : 40 °C ~ 60 °C(104 °F ~ 140 °F)

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

Mold	Bn(Nozzle)	B3(Metering)	B2(Compression)	B1(Feeding)	Hopper
40 ~ 60 °C	180 ~ 210 °C	190 ~ 200 °C	180 ~ 190 °C	170 ~ 180 °C	60 ~ 80 °C
104 ~ 140 °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

Disclaimer

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