

POM | KEPITAL FT2020 | Reinforced · filled grade

- A 20% whisker-filled grade for general injection molding
- Suitable for parts requiring much higher stiffness, dimensional accuracy, and low warpage

Physical properties	Test Standard	Unit	Value
Density	ISO 1183	g/cm ³	1.59
Melt flow rate	ISO 1133	g/10min	15
Water absorption(23 °C, 50 %RH)	ISO 62	%	0.23

Thermal properties	Test Standard	Unit	Value
Heat deflection temperature(1.8 MPa)	ISO 75	$^{\circ}\! C$	152
Flammability	UL 94	_	НВ
Melting point(10 °C/min)	ISO 11357	°C	165
Coefficient of linear thermal expansion	ISO 11359	X 10 ⁻⁵ /°C	6

Mechanical properties	Test Standard	Unit	Value
Tensile stress	ISO 527	MPa	86
Tensile strain at yield	ISO 527	%	-
Nominal strain at break	ISO 527	%	2.7
Flexural strength	ISO 178	MPa	146
Flexural modulus	ISO 178	MPa	4,800
Charpy impact strength(Notched) @ 23°C	ISO 179/1eA	kJ/m ²	3.6

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	-

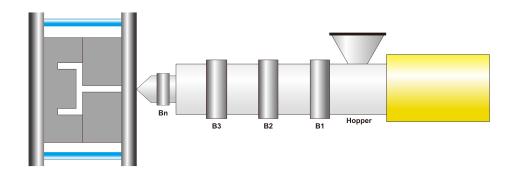
Other	Test Standard	Unit	Value
Mold shrinkage(flow direction, $\Phi = 100 \text{ mm}$, $t = 3 \text{ mm}$)	KEP Method	%	0.9

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Injection molding condition



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

It is recommend to dry material at $80^{\circ}\text{C} \sim 100^{\circ}\text{C}(176^{\circ}\text{F} \sim 212^{\circ}\text{F})$ for 3 h ~ 4 h if necessary.

Temperature

Mold temperature : $60 \,^{\circ}\text{C} \sim 80 \,^{\circ}\text{C} (140 \,^{\circ}\text{F} \sim 176 \,^{\circ}\text{F})$ Barrel temperature : $170 \,^{\circ}\text{C} \sim 210 \,^{\circ}\text{C} (338 \,^{\circ}\text{F} \sim 410 \,^{\circ}\text{F})$

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

Disclaimer

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