

POM | KEPITAL F20-52 | UV & weather resistance grade

- A UV-stabilized medium-viscosity grade for general injection molding.
- Developed for applications in automotive interiors and exposed parts.

| Physical properties | Test Standard | Unit | Value |
|---------------------------------|---------------|-------------------|-------|
| Density | ISO 1183 | g/cm ³ | 1.41 |
| Melt flow rate | ISO 1133 | g/10min | 10 |
| Water absorption(23 °C, 50 %RH) | ISO 62 | % | 0.2 |

| Thermal properties | Test Standard | Unit | Value |
|---|---------------|------------------------|-------|
| Heat deflection temperature(1.8 MPa) | ISO 75 | $^{\circ}\!\mathrm{C}$ | 92 |
| Flammability | UL 94 | _ | НВ |
| 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 | 2,600 |
| Tensile stress | ISO 527 | MPa | 62 |
| Tensile strain at yield | ISO 527 | % | 10 |
| Nominal strain at break | ISO 527 | % | 34 |
| Flexural strength | ISO 178 | MPa | 83 |
| Flexural modulus | ISO 178 | MPa | 2,350 |
| Charpy impact strength(Notched) @ 23°C | ISO 179/1eA | kJ/m ² | 6.0 |
| Charpy impact strength(Notched) @ -30°C | ISO 179/1eA | kJ/m ² | 5.5 |

| 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 | 19 |

| Other | Test Standard | Unit | Value |
|---|---------------|------|-------|
| Mold shrinkage(flow direction, $\Phi = 100 \text{ mm}$, $t = 3 \text{ mm}$) | KEP Method | % | 2.0 |

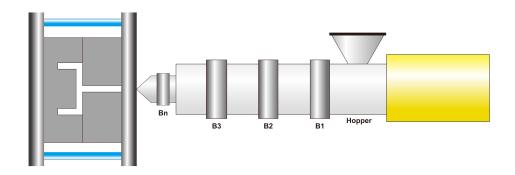
| General information | Test Standard | Unit | Value |
|----------------------------|---------------|------|-------|
| Polymer abbreviation | ISO 1043 | - | POM |

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Injection molding condition



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

It is recommend to dry material at $80^{\circ}\text{C} \sim 90^{\circ}\text{C}(176^{\circ}\text{F} \sim 212^{\circ}\text{F})$ 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

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