

# CELCON® TX-21

## CELCON®

A polymer modified wear resistance grade (medium viscosity) for general injection molding. Suitable for applications requiring reduced wear noise and a strong friction and wear resistance without sacrificing mechanical properties.

### Product information

Resin Identification	POM	ISO 1043
Part Marking Code	>POM<	ISO 11469

### Rheological properties

Melt mass-flow rate	16 g/10min	ISO 1133
Melt mass-flow rate, Temperature	190 °C	
Melt mass-flow rate, Load	2.16 kg	
Moulding shrinkage, parallel	2.0 %	ISO 294-4, 2577

### Typical mechanical properties

Tensile modulus	2500 MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	58 MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	10 %	ISO 527-1/-2
Nominal strain at break	33 %	ISO 527-1/-2
Flexural modulus	2350 MPa	ISO 178
Flexural strength	79 MPa	ISO 178
Charpy notched impact strength, 23°C	7.5 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	5 kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.38 <sup>[C]</sup>	

[C]: Calculated

### Thermal properties

Melting temperature, 10°C/min	165 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	89 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	130 E-6/K	ISO 11359-1/-2

### Electrical properties

Volume resistivity	1E12 Ohm.m	IEC 62631-3-1
Surface resistivity	1E16 Ohm	IEC 62631-3-2

### Physical/Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Density	1390 kg/m <sup>3</sup>	ISO 1183

### Injection

Drying Recommended	no
Drying Temperature	100 °C
Drying Time, Dehumidified Dryer	3 - 4 h
Processing Moisture Content	≤0.2 %
Melt Temperature Optimum	195 °C
Min. melt temperature	180 °C
Max. melt temperature	210 °C

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Screw tangential speed	≤0.3 m/s
Mold Temperature Optimum	70 °C
Min. mould temperature	60 °C
Max. mould temperature	80 °C
Hold pressure range	60 - 120 MPa

### Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Low wear / Low friction