

# CELCON® F40-34

## CELCON®

- A standard unfilled and extra easy-flowing (ultra low-viscosity) grade for general injection molding
- Suitable for multi-cavity molds and thin-walled precision parts

### Product information

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

### Rheological properties

Melt mass-flow rate	75 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	2900 MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	65 MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	7 %	ISO 527-1/-2
Nominal strain at break	13 %	ISO 527-1/-2
Flexural modulus	2700 MPa	ISO 178
Flexural strength	93 MPa	ISO 178
Charpy notched impact strength, 23°C	3.5 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	2.2 kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.418	

### Thermal properties

Melting temperature, 10°C/min	165 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	101 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	120 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
Electric strength	19 kV/mm	IEC 60243-1

### Physical/Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Density	1410 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
Back pressure	2 MPa

### Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	High Flow

### Additional information

Injection molding

### Processing

mold temperature: 60°C ~ 80°C (140°F ~ 160°F)  
barrel temperature: 170°C ~ 210°C (338°F ~ 410°F)  
screw speed: 150mm/s ~ 200mm/s  
back pressure: max. 20bar

Processing Notes

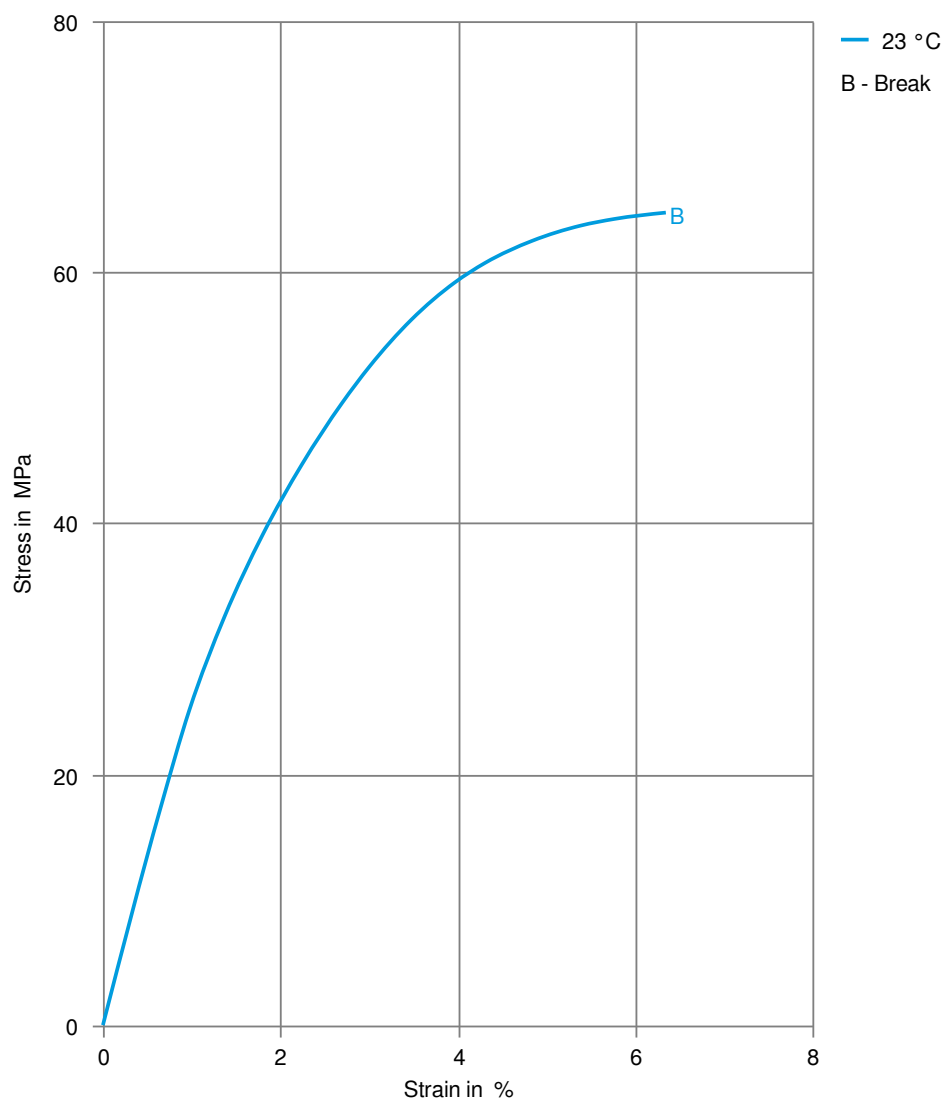
### Pre-Drying

suggested pre-drying condition: 80 °C ~ 90 °C (176°F ~ 194°F) 3 h ~ 4 h  
suggested max. moisture: 0.1%

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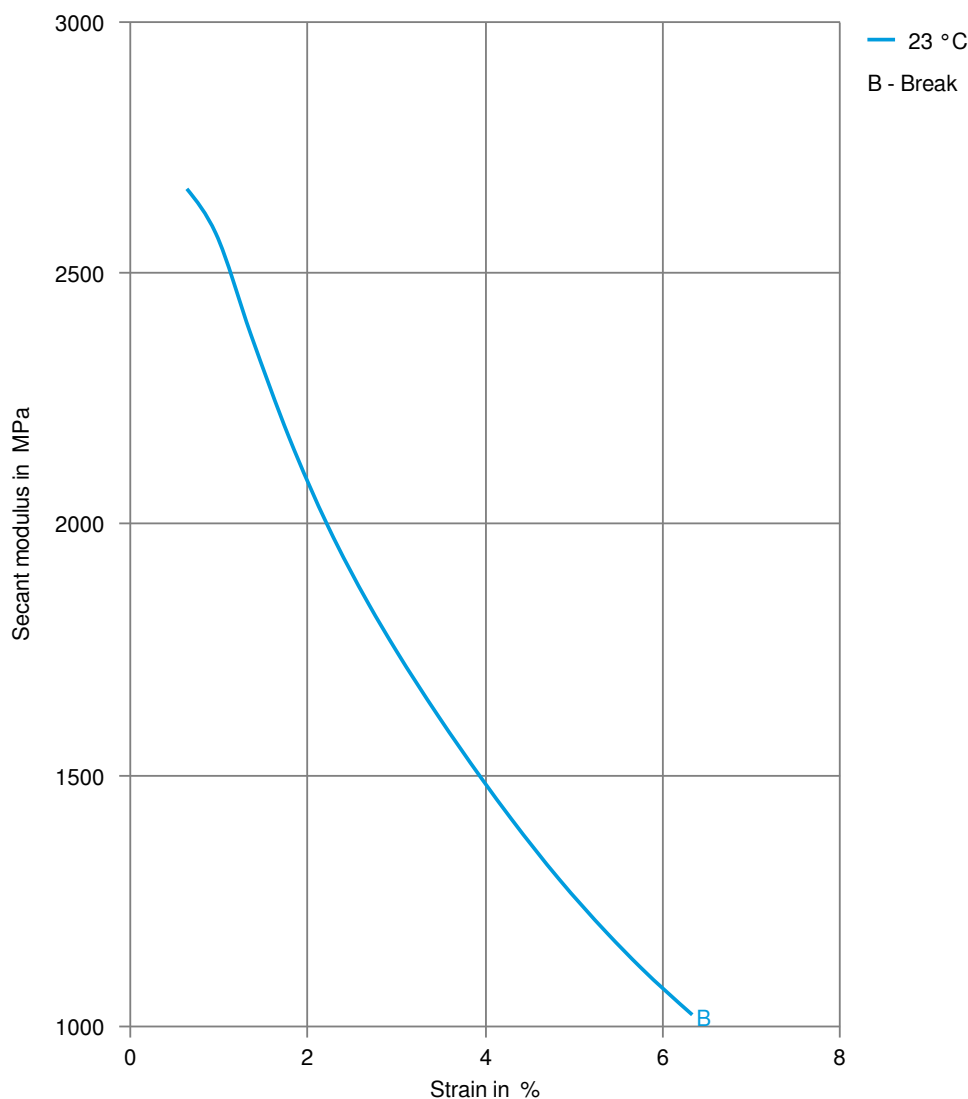
## Stress-strain



# CELCON® F40-34

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## Secant modulus-strain



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Page: 4 of 4

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