

# CELCON<sup>®</sup> F20-33

## CELCON<sup>®</sup>

A toughness-improved (medium viscosity) grade for general injection molding.  
 Features: improved molding cycle, toughness and wear resistance

### Product information

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

### Rheological properties

Melt mass-flow rate	9 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	2750 MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	65 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	2550 MPa	ISO 178
Flexural strength	87 MPa	ISO 178
Charpy notched impact strength, 23 °C	6.5 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30 °C	5.5 kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.37 <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	100 °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

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Max. melt temperature	210 °C
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

## Additional information

Injection molding

## Processing

mold temperature: 60°C ~ 80°C (140°F ~ 176°F)  
 barrel temperature: 170°C ~ 210°C (338°F ~ 410°F)  
 screw speed: 150mm/s ~ 200mm/s  
 back pressure: max. 20 bar

Processing Notes

## Pre-Drying

It is recommended to dry material at 80°C ~ 90°C (176°F ~ 194°F) for 3h ~ 4h if necessary.  
 suggest max. moisture: 0.1%

## Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
General Motors	GMW22P-POM-C2	Natural
General Motors	GMW22P-POM-C2	Black
Hyundai	MS237-09 Type A	Ulsan, Korea
Hyundai	MS237-14 Type A	Ulsan, Korea
Hyundai	MS941-03 Type M-1	Ulsan, Korea