

CELCON® M90-45XAP®

Low emission UV resistant grade based on Celcon M90™ for interior automotive

Celcon® acetal copolymer grade M90-45XAP® is a UV resistant, low emission version, medium viscosity polymer providing optimum performance in general purpose injection molding primarily for the interior automotive market. This grade provides overall excellent performance in many applications.

Celcon® M90-45XAP® is formulated in custom colors for Toyota interior UV stabilized applications

Rheological properties

Melt volume-flow rate	8 cm ³ /10min	ISO 1133
Temperature	190 °C	
Load	2.16 kg	
Moulding shrinkage range, parallel	2.5 %	ISO 294-4, 2577
Moulding shrinkage range, normal	2.4 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	2650 MPa	ISO 527-1/-2
Yield stress, 50mm/min	64 MPa	ISO 527-1/-2
Yield strain, 50mm/min	9 %	ISO 527-1/-2
Flexural Modulus	2450 MPa	ISO 178
Flexural Strength	77 MPa	ISO 178
Charpy notched impact strength, 23°C	6 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	4 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	6 kJ/m ²	ISO 180/1A

Thermal properties

Melting temperature, 10°C/min	167 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	91 °C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	151 °C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	110 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	120 E-6/K	ISO 11359-1/-2

Other properties

Density	1410 kg/m ³	ISO 1183
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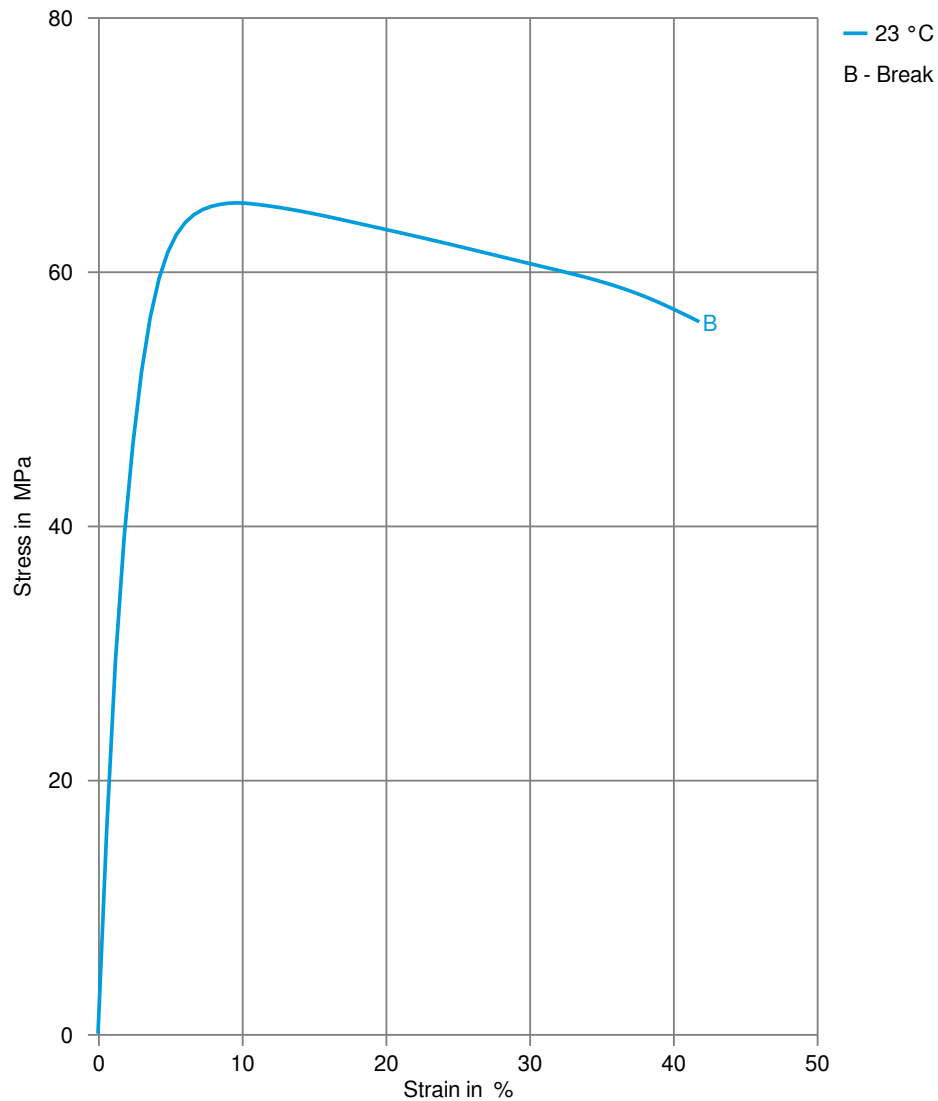
Injection

Drying Temperature	100 - 120 °C	
Drying Time, Dehumidified Dryer	3 - 4 h	
Melt Temperature Optimum	174 °C	Internal
Max. mould temperature	80 - 120 °C	
Back pressure	4 MPa	
Injection speed	slow-medium	



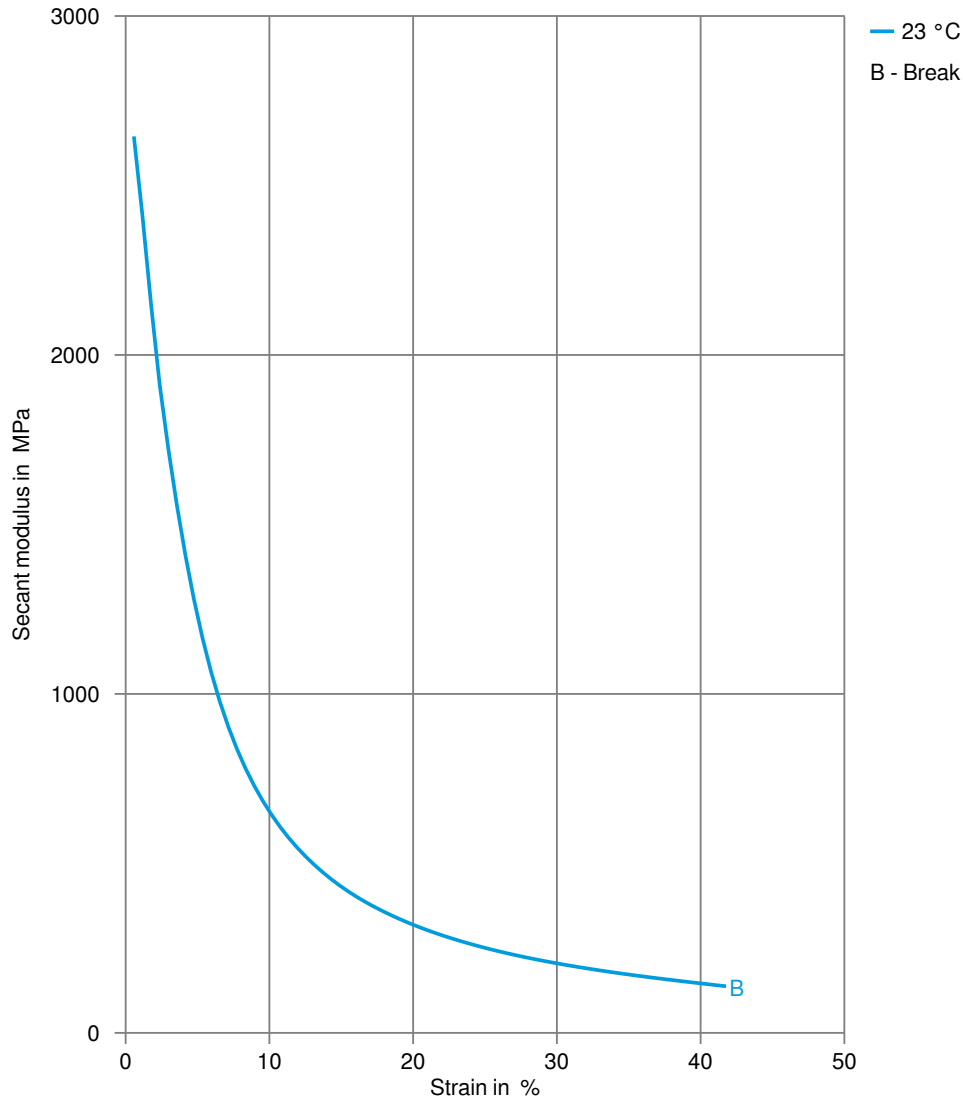
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Stress-strain



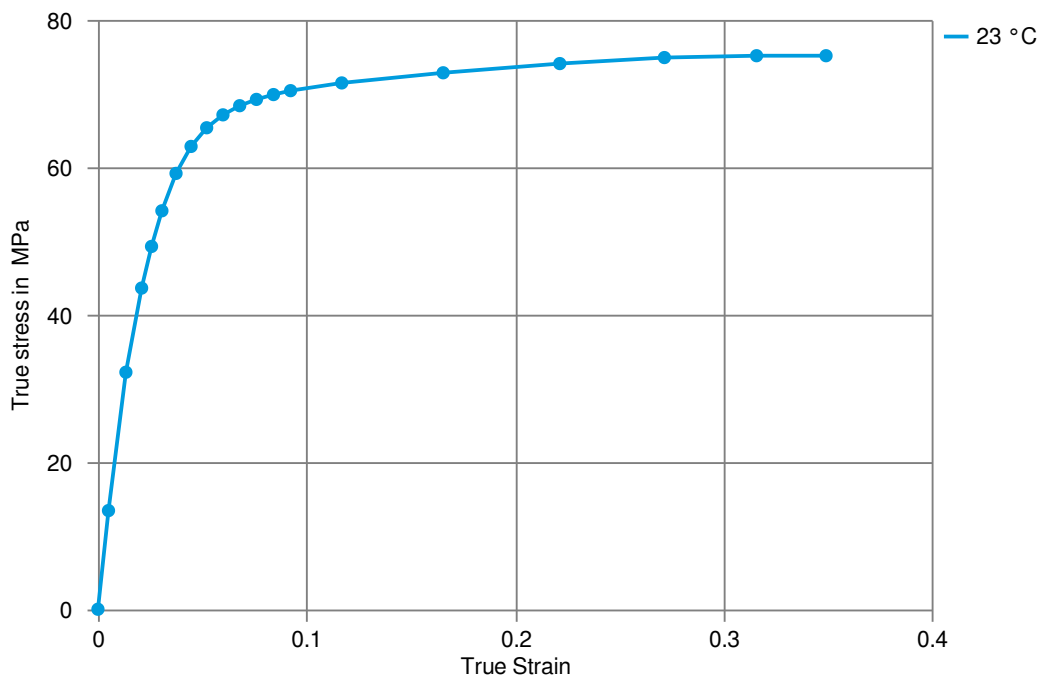
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Secant modulus-strain



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True stress-strain



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Processing Texts

Pre-drying

Drying is recommended to achieve lowest emission performance. If material contacts moisture through improper storage or handling, drying may be necessary to prevent splay and odor issues.

Other Approvals

Other Approvals

OEM	Specification
Toyota	TSM5515G-1BVL

