Celanese
The chemistry inside innovation™

CELCON® UV140LG

CELCON®

Celcon® acetal copolymer grade UV140LG is a specialty grade of acetal copolymer formulated to provide good flow with a low gloss finish and a UV stability necessary for interior automotive applications.

Product information

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

Rheological properties

Melt volume-flow rate	13	cm^3/10min	ISO 1133
Temperature	190	°C	
Load	2.16	kg	
Melt mass-flow rate	14	g/10min	ISO 1133
Melt mass-flow rate, Temperature	190	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage, parallel	1.6	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.5	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	1950	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	41	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	10	%	ISO 527-1/-2
Nominal strain at break	11	%	ISO 527-1/-2
Flexural modulus	1900	MPa	ISO 178
Flexural stress at 3.5%	50	MPa	ISO 178
Tensile creep modulus, 1h	1300	MPa	ISO 899-1
Tensile creep modulus, 1000h	650	MPa	ISO 899-1
Charpy notched impact strength, 23°C	3.1	kJ/m^2	ISO 179/1eA
Izod notched impact strength, 23°C	4	kJ/m^2	ISO 180/1A
Poisson's ratio	0.46		

Thermal properties

Melting temperature, 10°C/min	165	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	80	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	138	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	130	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	130	E-6/K	ISO 11359-1/-2

Physical/Other properties

Density	1330	kg/m^3	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

Celanese
The chemistry inside innovation™

CELCON® UV140LG

CELCON®

Min. melt temperature	180	°C
Max. melt temperature	210	°C
Screw tangential speed	≤0.3	m/s
Mold Temperature Optimum	90	°C
Min. mould temperature	80	°C
Max. mould temperature	105	°C
Hold pressure range	60 - 120	MPa
Back pressure	4	MPa
Ejection temperature	130	°C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	U.V. stabilised or stable to weather, Reduced gloss

Additional information

Injection molding

Preprocessing

Drying is recommended for low gloss grades of Celcon® and Hostaform® acetal copolymers. Excessive moisture can lead to splay (silver streaking) in molded parts. For better uniformity in molding especially when using regrind or material that has been stored in containers open to the atmosphere, recommended drying conditions are 80 C (180 F) for 3hours. Desiccant hopper dryers are not required. Maximum water content = 0.35%

Processing

Standard reciprocating screw injection molding machines with a high compression screw (minimum 3:1 and preferably 4:1) and low back pressure (0.35 Mpa/50 PSI) are favored. Using a low compression screw (I.E. general purpose 2:1 compression ratio) can result in unmelted particles and poor melt homogeneity. Using a high back pressure to make up for a low compression ratio may lead to excessive shear heating and deterioration of the material.

Use a slow injection speed until material passes through the gate.

Melt Temperature: Preferred range 180-195 C (~356-~383 F). Melt temperature should never exceed 230 C (450 F).

Mold Surface Temperature: Preferred range 80-105 C especially with wall thickness less than 1.5 mm (0.060 in.). May require mold temperature as high as 120 C (250 F) to reproduce mold surface or to assure minimal molded in stress. In general, mold surface temperatures lower than 82 C (180 F) may produce a hazy surface or a surface with flow lines, pits and other included defects.

Postprocessing

Postprocessing conditioning and moisturizing are not required. It may be

CELCON® UV140LG

CELCON®

necessary to fixture large or complicated parts with varying wall thickness to prevent warpage while cooling to ambient temperature.

Processing Notes

Pre-Drying

Predrying is required before processing to ensure a low gloss finish.

Automotive

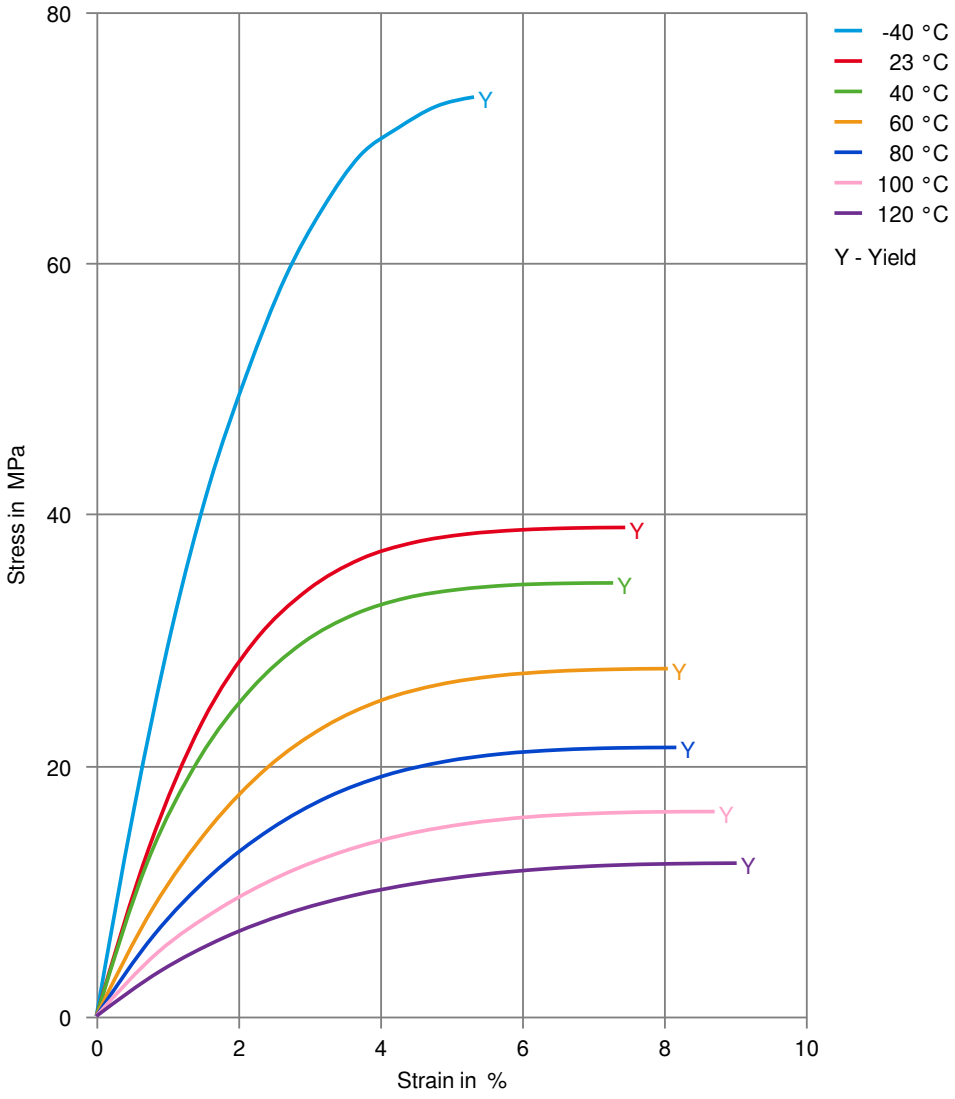
OEM	STANDARD	ADDITIONAL INFORMATION
Ford	WSK-M4D840-A5	
Honda	Color approved	
Nissan	Color approved	
Stellantis - Chrysler	MS.50095 / CPN-5109	100% Color Match

Celanese
The chemistry inside innovation™

CELCON® UV140LG

CELCON®

Stress-strain

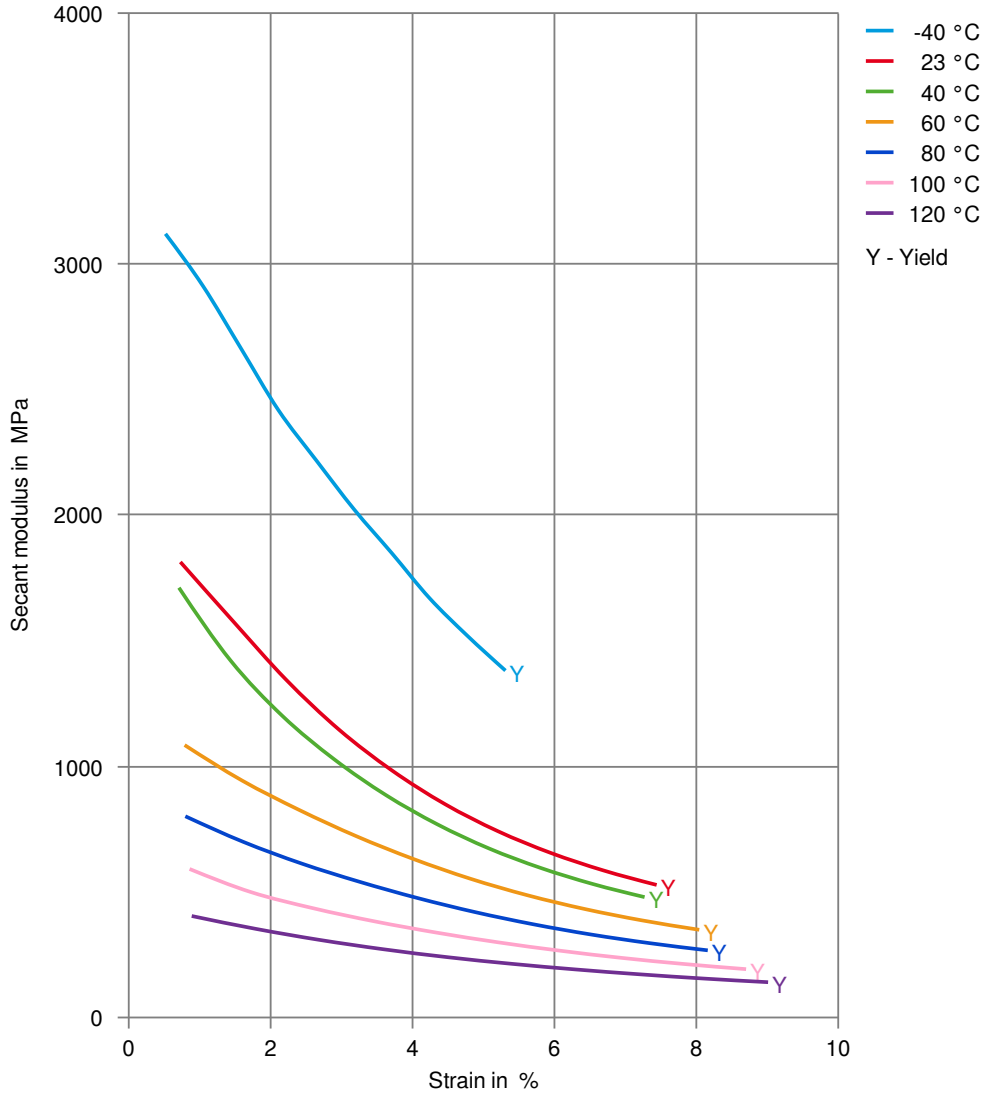


Celanese
The chemistry inside innovation™

CELCON® UV140LG

CELCON®

Secant modulus-strain

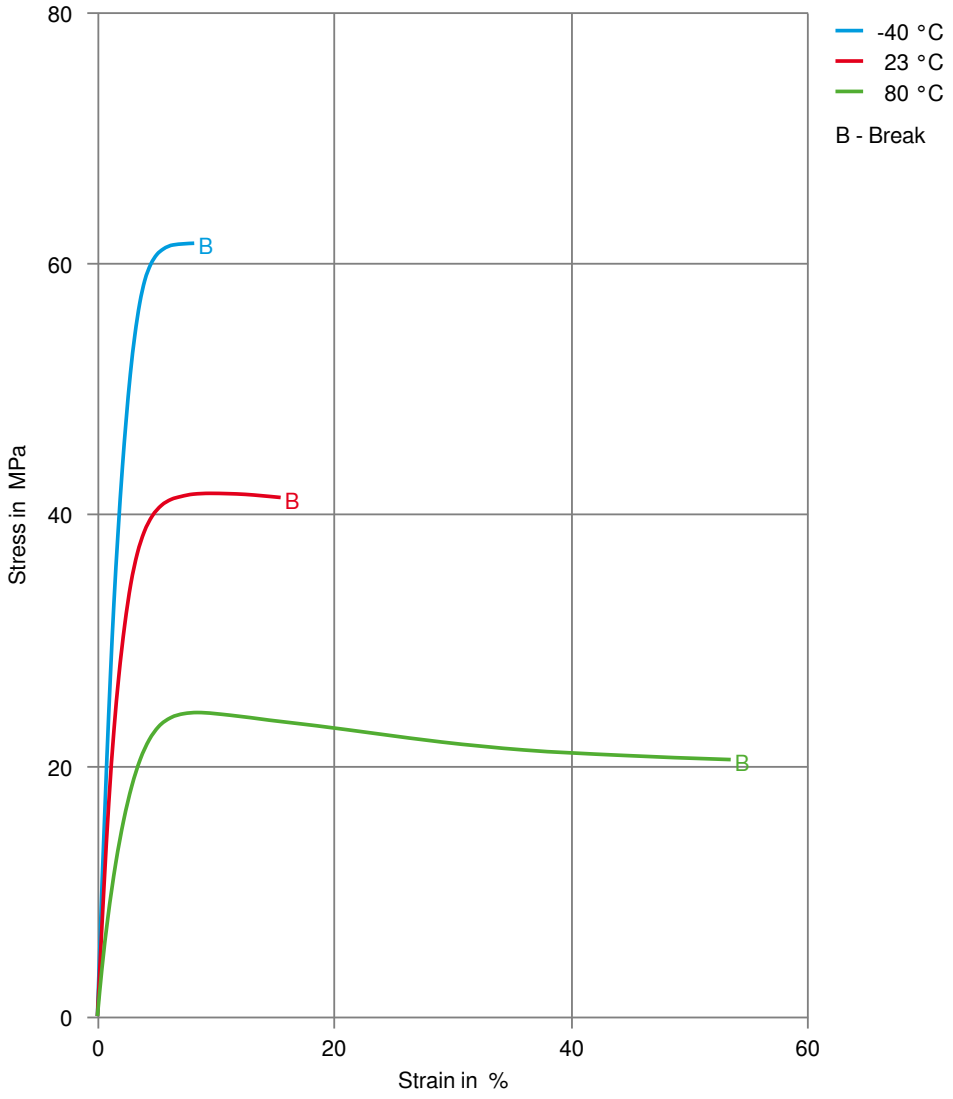


Celanese
The chemistry inside innovation™

CELCON® UV140LG

CELCON®

Stress-strain, 50mm/min

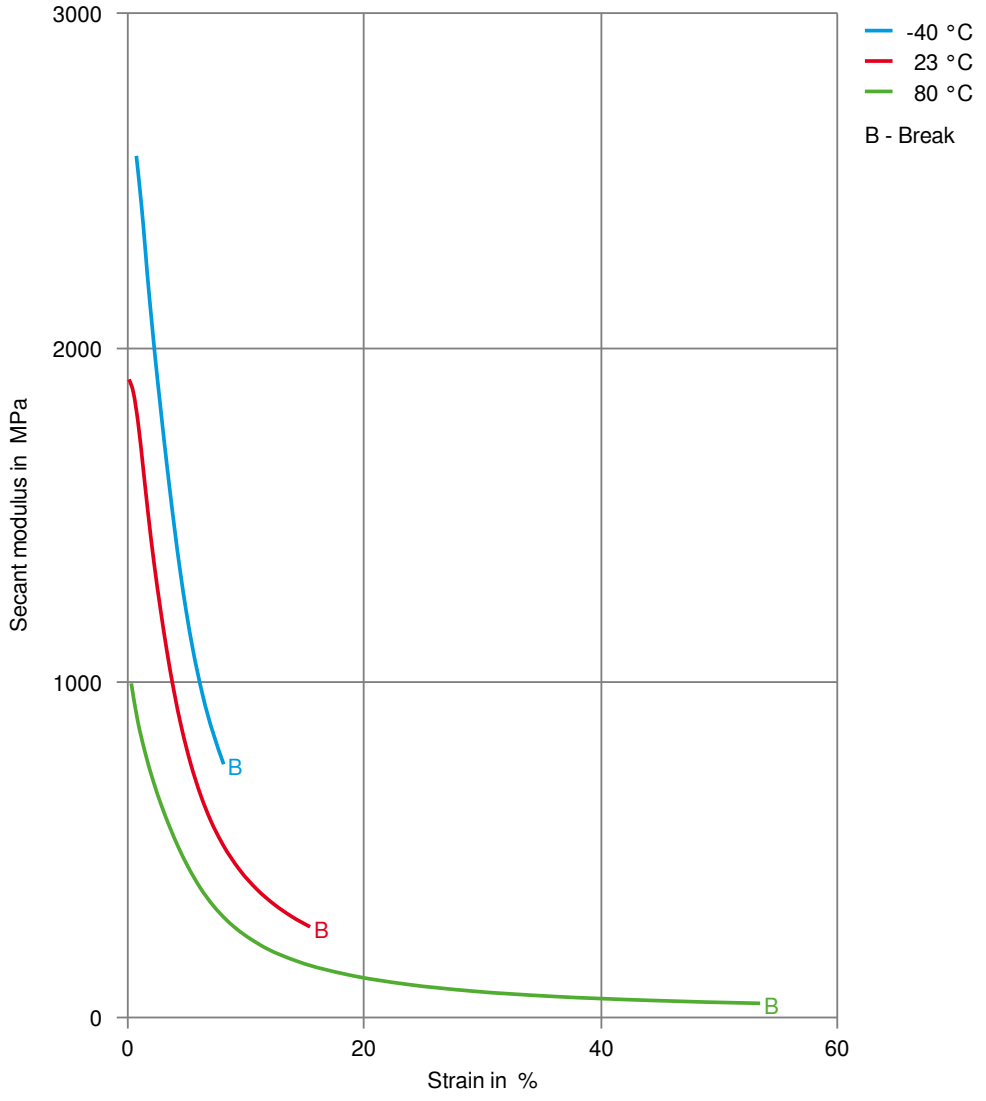


Celanese
The chemistry inside innovation™

CELCON® UV140LG

CELCON®

Secant modulus-strain, 50mm/min



Revised: 2024-06-28 Source: Celanese Materials Database