Celanese
The chemistry inside innovation™

HOSTAFORM® C 13031 XF

Media resistant, general purpose acetal, fuel resistance including hot diesel
Hostaform® acetal copolymer grade C13031 XF is an acetal copolymer modified to resist deterioration from aggressive fuel blends. This material is specially targeted for transportation industry fuel systems. In natural form, Hostaform® C13031 XF has a distinctive yellow color (Color code 50/5339) to denote use for fuel systems. Additionally the product is available in black 10/9022 for laser welding applications.

Rheological properties

Melt volume-flow rate	12	cm^3/10min	ISO 1133
Temperature	190	°C	
Load	2.16	kg	
Moulding shrinkage, parallel	2.2	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.9	%	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	2850	MPa	ISO 527-1/-2
Yield stress, 50mm/min	62	MPa	ISO 527-1/-2
Yield strain, 50mm/min	11	%	ISO 527-1/-2
Nominal strain at break	30	%	ISO 527-1/-2
Flexural Modulus	2900	MPa	ISO 178
Flexural Stress at 3.5%	76	MPa	ISO 178
Charpy impact strength, 23°C	150	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	140	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	7.5	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	6	kJ/m^2	ISO 179/1eA
Hardness, Rockwell, M-scale	88		ISO 2039-2
Ball indentation hardness, H 358/30	137	MPa	ISO 2039-1
Poisson's ratio	0.423		

Thermal properties

Melting temperature, 10°C/min	170	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	102	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	159	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	90	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	90	E-6/K	ISO 11359-1/-2

Other properties

Humidity absorption, 2mm	0.3	%	Sim. to ISO 62
Density	1420	kg/m^3	ISO 1183

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Injection

Drying Temperature	100 - 120	°C
Drying Time, Dehumidified Dryer	3 - 4	h
Screw tangential speed	0.2 - 0.21	m/s
Max. mould temperature	80 - 120	°C
Back pressure	4	MPa
Injection speed	slow-medium	

Additional information

Injection molding	Standard injection moulding machines with three phase (15 to 25 D) plasticating screws will fit.

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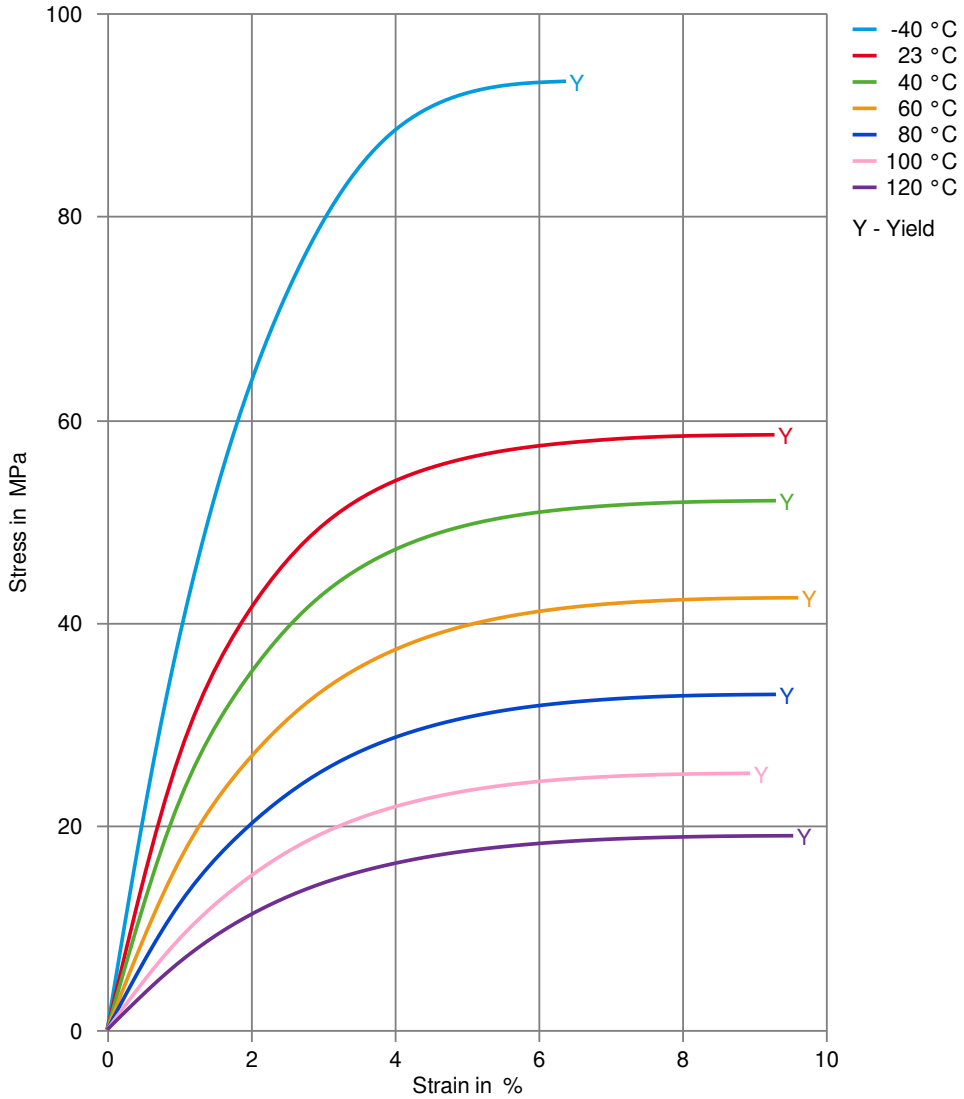
Stress-strain



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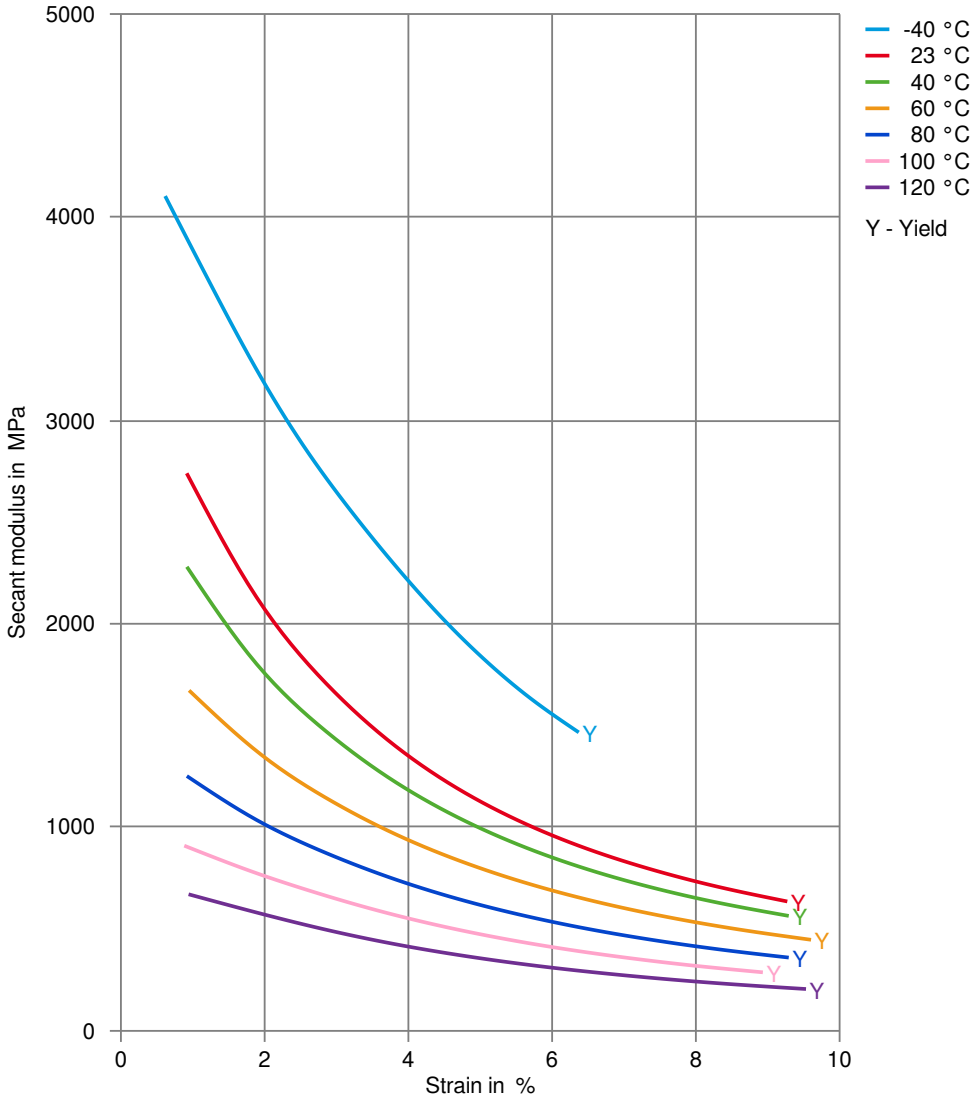
Secant modulus-strain



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Processing Texts

Pre-drying	Drying is not normally required. If material has come in contact with moisture through improper storage or handling or through regrind use, drying may be necessary to prevent splay and odor problems.
Injection molding	Standard injection moulding machines with three phase (15 to 25 D) plasticating screws will fit.
Injection molding Preprocessing	General drying is not necessary due to low moisture absorption of the resin. In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended. Max. Water content 0,2 %
Injection molding Postprocessing	Conditioning e.g. moisturizing is not necessary.

Other Approvals

Other Approvals

OEM	Specification	Additional Information
Bosch	N28 BN22-O026	
Stellantis - Chrysler	CPN 4111	Florence KY, Bishop TX, Kelsterbach CANOD (50 /5339) ASTMD6778PO M0240B56440
Continental	TST N 055 54.03	
Continental	TST N 055 54.25	
Mercedes-Benz Group (Daimler)		Fuel
GM	GMW18026P-POM	
Stellantis - PSA Group	FTM69 0009	
Stellantis - PSA Group	01994_14_00058	
Renault	EP10-1c	
Toyota	TSM5515G-1D	
VW Group	TL 526 36B	

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Chemical Media Resistance

Standard Fuels

- ✔ ISO 1817 Liquid 1 - E5, 60°C
- ✔ ISO 1817 Liquid 2 - M15E4, 60°C
- ✔ ISO 1817 Liquid 3 - M3E7, 60°C
- ✔ ISO 1817 Liquid 4 - M15, 60°C
- ✔ Standard fuel without alcohol (pref. ISO 1817 Liquid C), 23°C
- ✔ Standard fuel with alcohol (pref. ISO 1817 Liquid 4), 23°C

Symbols used:

✔ possibly resistant
Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

✘ not recommended - see explanation
Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

Revised: 2023-07-09 Source: Celanese Materials Database