

HOSTAFORM® C 13031 XAP®

high stiffness

Polyacetal copolymer, reduced emission Easy flowing Injection molding type like C 13021 XAP®, but with higher strength, rigidity and hardness over the entire permissible temperature range for HOSTAFORM®; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation. Emissions according to VDA 275 < 10 ppm (natural and colored grades) Monomers and additives are listed in EU-Regulation (EU) 10/2011 FDA compliant according to 21 CFR 177.2470 Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1 mm. Ranges of applications: For molded parts with higher requirements to strength, rigidity und hardness, ranges of applications with fuel contact.

Rheological properties

Melt volume-flow rate	12 cm ³ /10min	ISO 1133
Temperature	190 °C	
Load	2.16 kg	
Moulding shrinkage range, parallel	2.0 %	ISO 294-4, 2577
Moulding shrinkage range, normal	1.8 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	3050 MPa	ISO 527-1/-2
Yield stress, 50mm/min	68 MPa	ISO 527-1/-2
Yield strain, 50mm/min	8 %	ISO 527-1/-2
Nominal strain at break	28 %	ISO 527-1/-2
Flexural Modulus	3000 MPa	ISO 178
Tensile creep modulus, 1h	2750 MPa	ISO 899-1
Tensile creep modulus, 1000h	1450 MPa	ISO 899-1
Charpy impact strength, 23°C	200 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	200 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	6.7 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	6 kJ/m ²	ISO 179/1eA
Ball indentation hardness, H 358/30	156 MPa	ISO 2039-1

Thermal properties

Melting temperature, 10°C/min	170 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	107 °C	ISO 75-1/-2
Vicat softening temperature, 50°C/h, 50N	158 °C	ISO 306
Coeff. of linear therm. expansion, parallel	110 E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.155 W/(m K)	Internal

Electrical properties

Relative permittivity, 100Hz	4	IEC 62631-2-1
Relative permittivity, 1MHz	4	IEC 62631-2-1
Dissipation factor, 100Hz	20 E-4	IEC 62631-2-1
Dissipation factor, 1MHz	50 E-4	IEC 62631-2-1
Volume resistivity	1E12 Ohm.m	IEC 62631-3-1
Surface resistivity	1E14 Ohm	IEC 62631-3-2

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Electric strength
Comparative tracking index

35 kV/mm
PLC 0 PLC

IEC 60243-1
UL 746A

Other properties

Humidity absorption, 2mm
Water absorption, 2mm
Density

0.2 %
0.65 %
1410 kg/m³

Sim. to ISO 62
Sim. to ISO 62
ISO 1183

Injection

Drying Temperature
Drying Time, Dehumidified Dryer
Processing Moisture Content
Screw tangential speed
Max. mould temperature
Back pressure
Injection speed

100 - 120 °C
3 - 4 h
0.15 %
0.2 - 0.21 m/s
80 - 120 °C
4 MPa
slow-medium

Characteristics

Additives

Release agent

Additional information

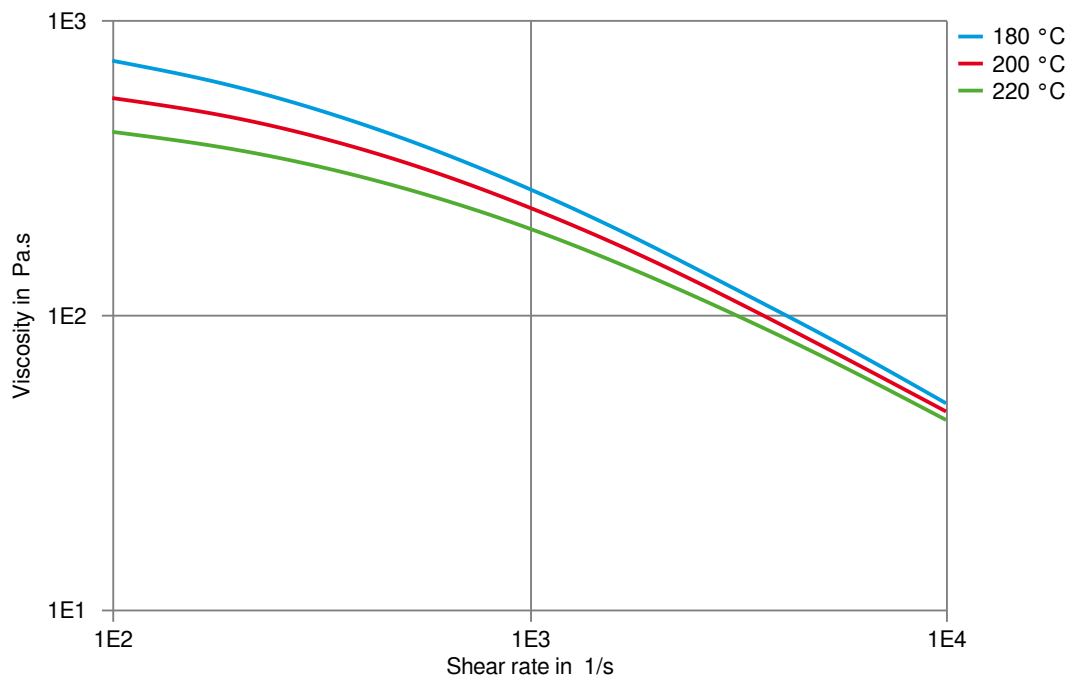
Injection molding

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



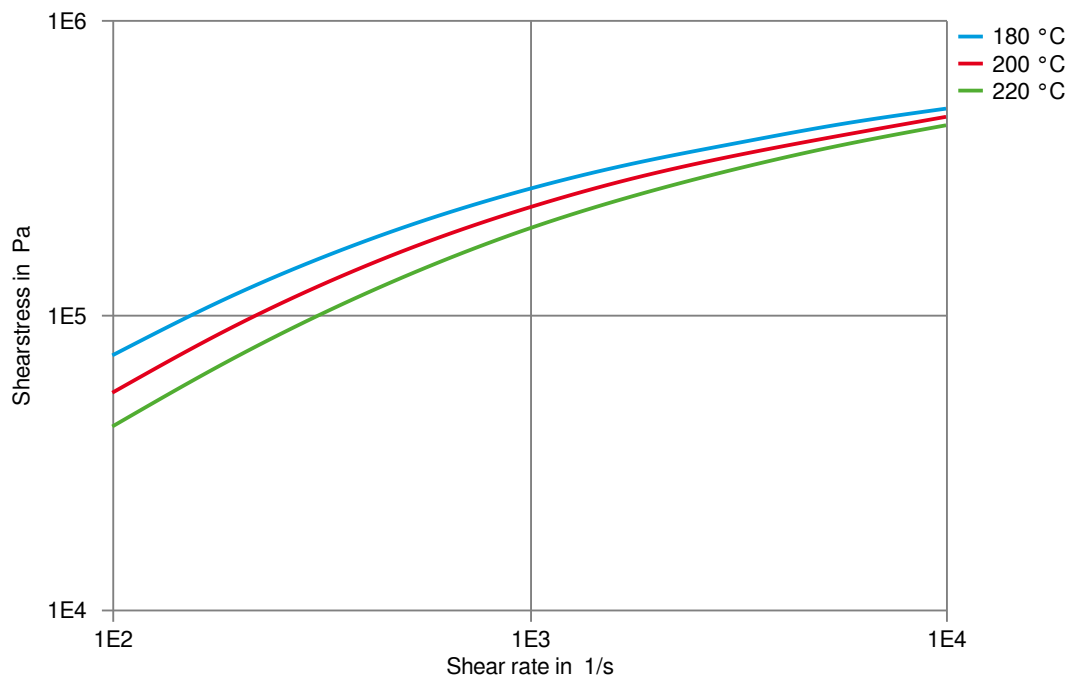
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Viscosity-shear rate



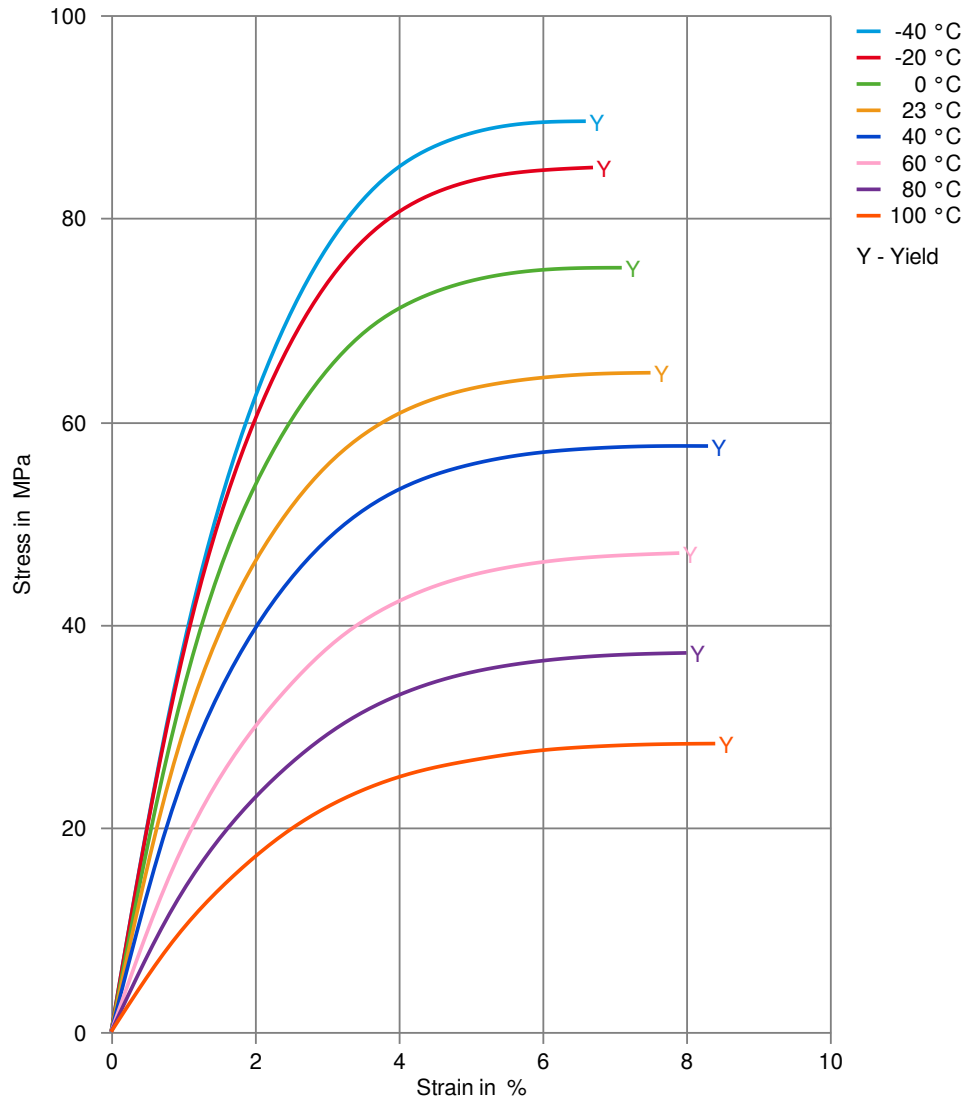
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Shearstress-shear rate



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Stress-strain

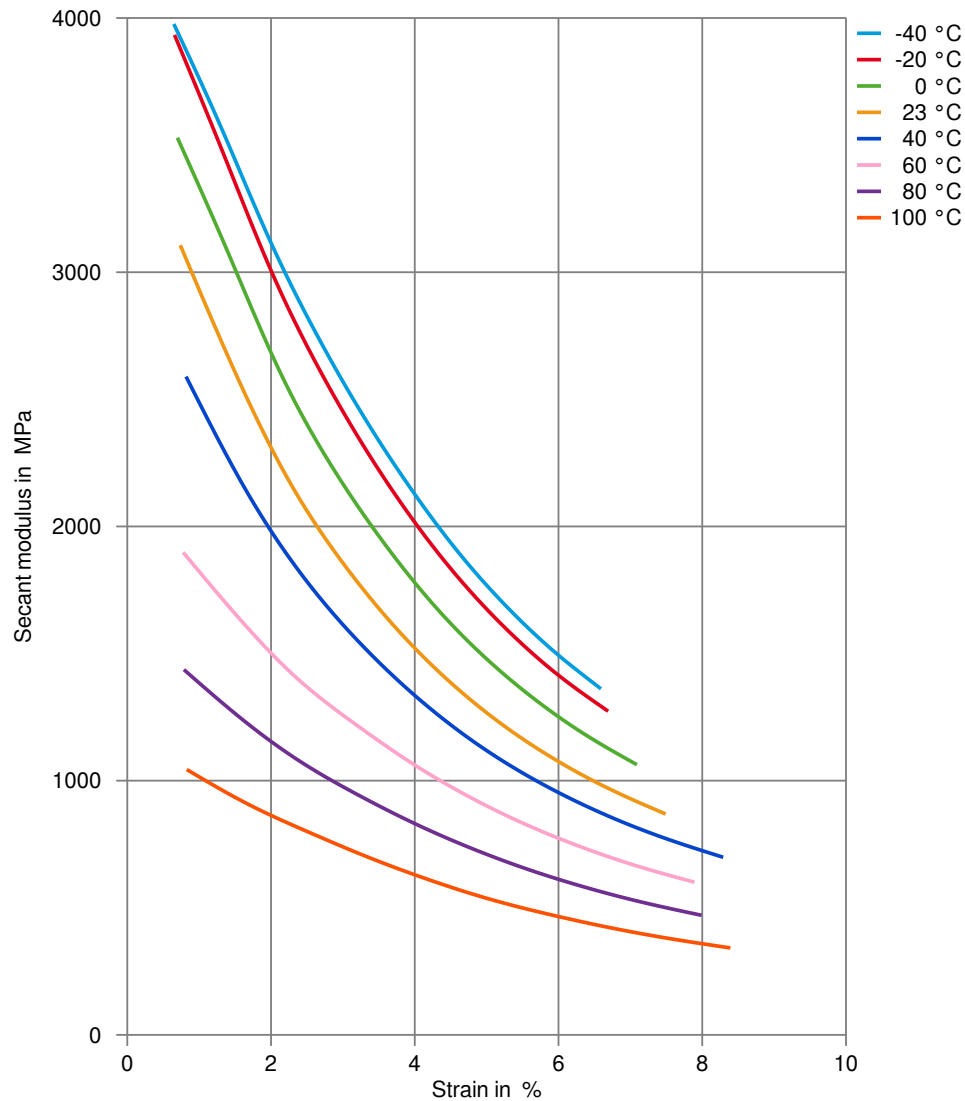


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Secant modulus-strain

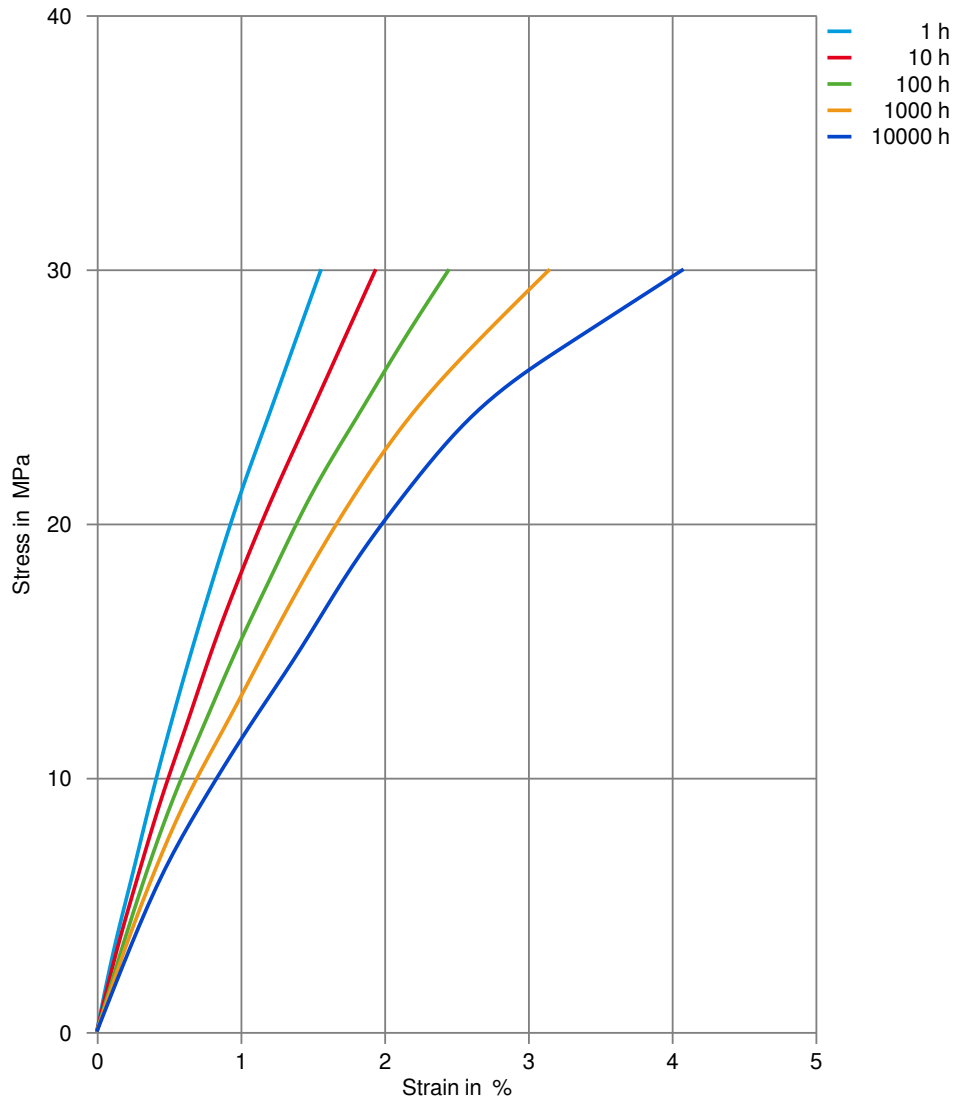


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Stress-strain (isochronous) 23°C

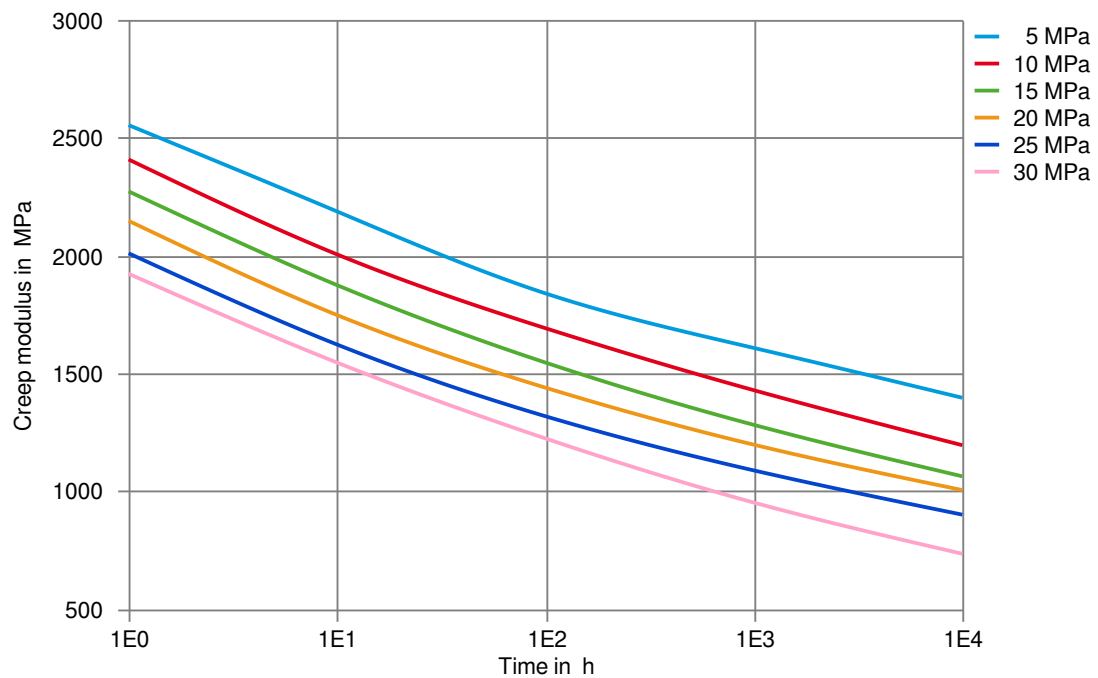


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Creep modulus-time 23°C



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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.
Longer pre-drying times/storage	The product can then be stored in standard conditions until processed.
Injection molding	Standard injection moulding machines with three phase (15 to 25 D) plasticating screws will fit.
Injection molding Preprocessing	To achieve low emission values pre drying using a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended. Max. Water content 0,1 %
Injection molding Postprocessing	Conditioning e.g. moisturizing is not necessary.

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