

# HOSTAFORM® C 13021 XAP®

Low Emission

POM copolymer

Easy flowing Injection molding type for precision molded parts and thin-walled molded parts with high rigidity, hardness and toughness; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation.

Emission according to VDA 275 < 10 mg/kg

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 < 75 mm/min for a thickness more than 1 mm.

Ranges of applications: automotive engineering, precision engineering, electric and electronical industry, domestic appliances.

FDA = Food and Drug Administration (USA) FMVSS = Federal Motor Vehicle Safety Standard (USA)

## Rheological properties

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

## Typical mechanical properties

Tensile Modulus	2900 MPa	ISO 527-1/-2
Yield stress, 50mm/min	65 MPa	ISO 527-1/-2
Yield strain, 50mm/min	9 %	ISO 527-1/-2
Nominal strain at break	25 %	ISO 527-1/-2
Flexural Modulus	2800 MPa	ISO 178
Tensile creep modulus, 1h	2500 MPa	ISO 899-1
Tensile creep modulus, 1000h	1300 MPa	ISO 899-1
Charpy impact strength, 23°C	200 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	200 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	6.5 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	6 kJ/m <sup>2</sup>	ISO 179/1eA
Ball indentation hardness, H 358/30	143 MPa	ISO 2039-1

## Thermal properties

Melting temperature, 10°C/min	166 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	106 °C	ISO 75-1/-2
Vicat softening temperature, 50°C/h, 50N	151 °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
Spec. heat capacity of melt	2210 J/(kg K)	Internal

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## Flammability

Burning Behav. at 1.5mm nom. thickn.	HB class	UL 94
Thickness tested	1.5 mm	UL 94
Burning Behav. at thickness h	HB class	UL 94
Thickness tested	3.00 mm	UL 94
UL recognition	yes	UL 94

## 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
Electric strength	35 kV/mm	IEC 60243-1
Comparative tracking index	PLC 0 PLC	UL 746A

## Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Water absorption, 2mm	0.65 %	Sim. to ISO 62
Density	1410 kg/m³	ISO 1183
Density of melt	1200 kg/m³	Internal

## Injection

Drying Temperature	100 - 120 °C	
Drying Time, Dehumidified Dryer	3 - 4 h	
Processing Moisture Content	0.15 %	
Screw tangential speed	0.2 - 0.21 m/s	
Max. mould temperature	80 - 120 °C	
Back pressure	4 MPa	
Injection speed	slow-medium	
Ejection temperature	140 °C	Internal

## Characteristics

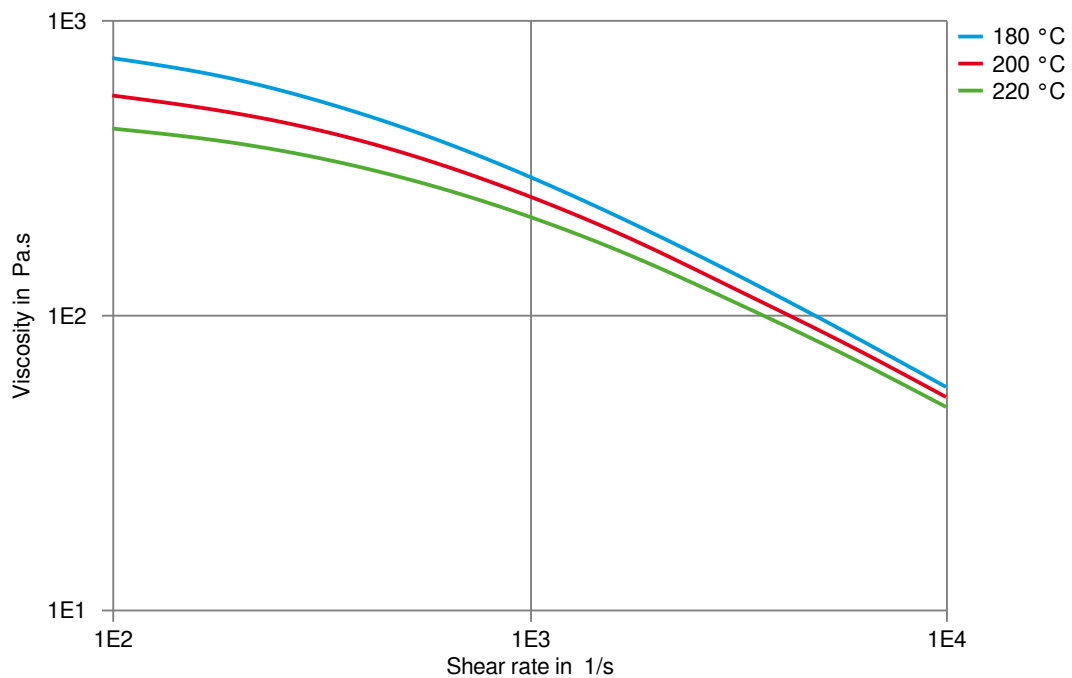
Additives	Release agent
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## Additional information

Injection molding	Standard injection moulding machines with three phase (15 to 25 D) plasticating screws will fit.
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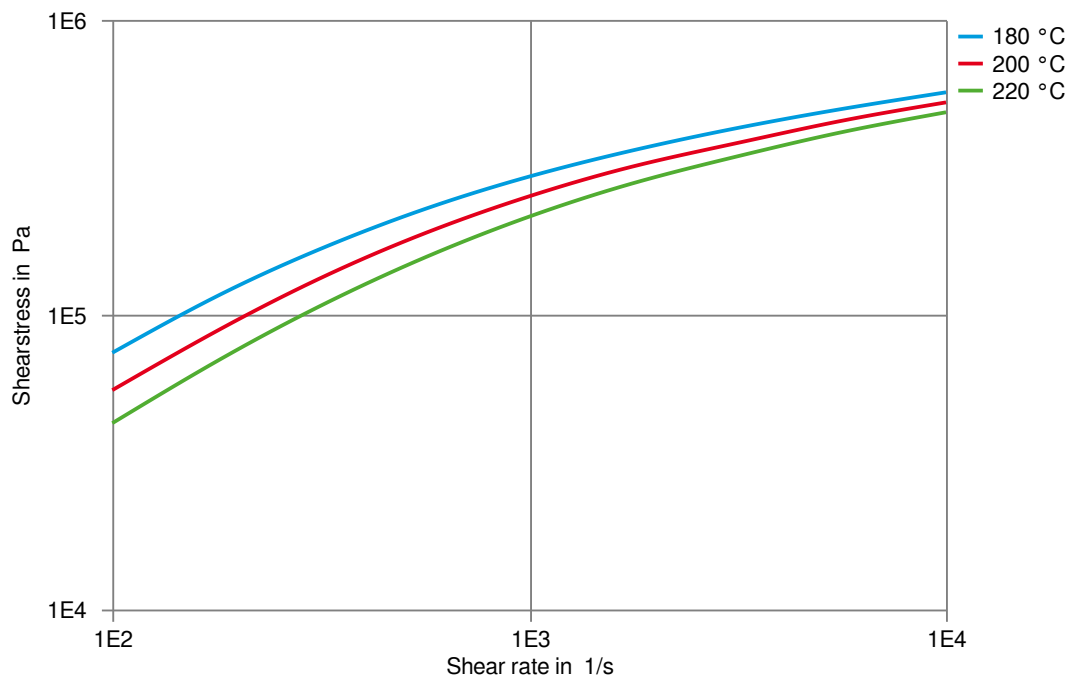
# HOSTAFORM® C 13021 XAP®

## Viscosity-shear rate



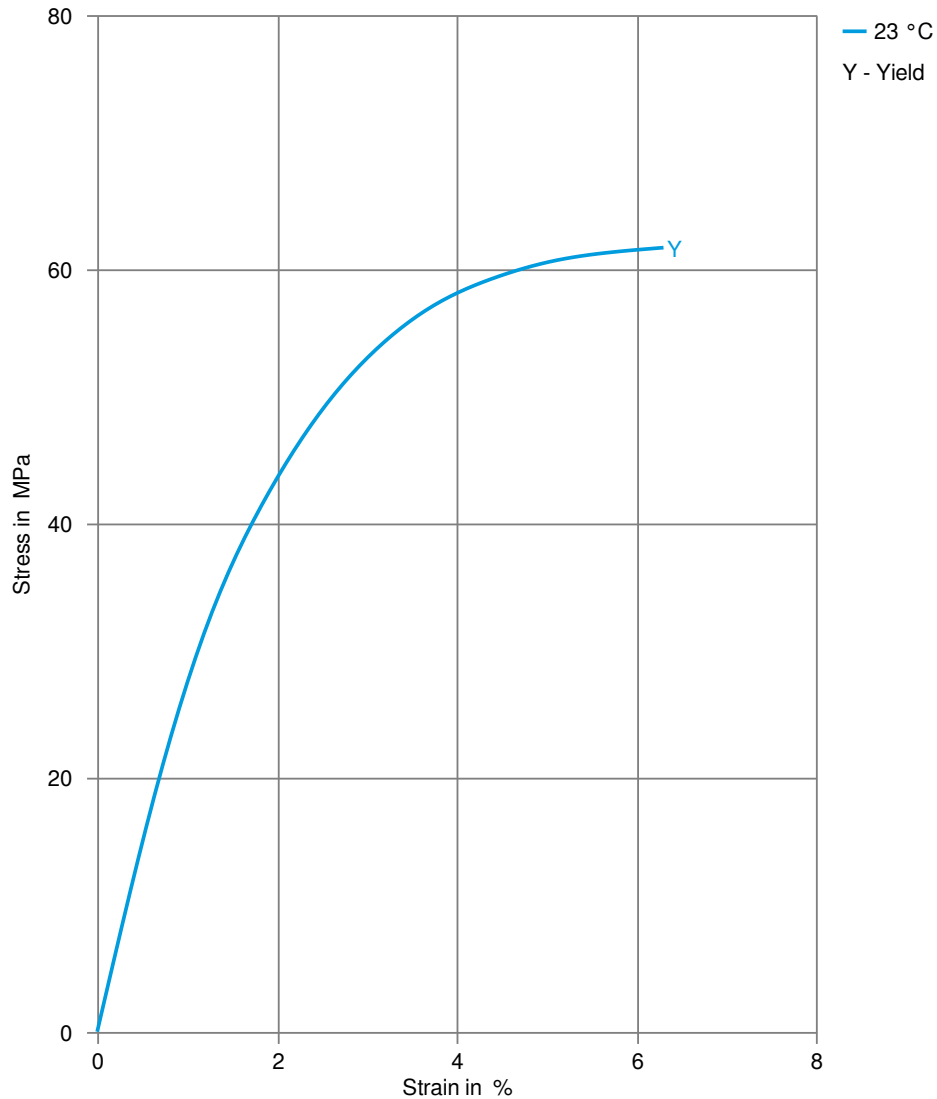
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## Shearstress-shear rate



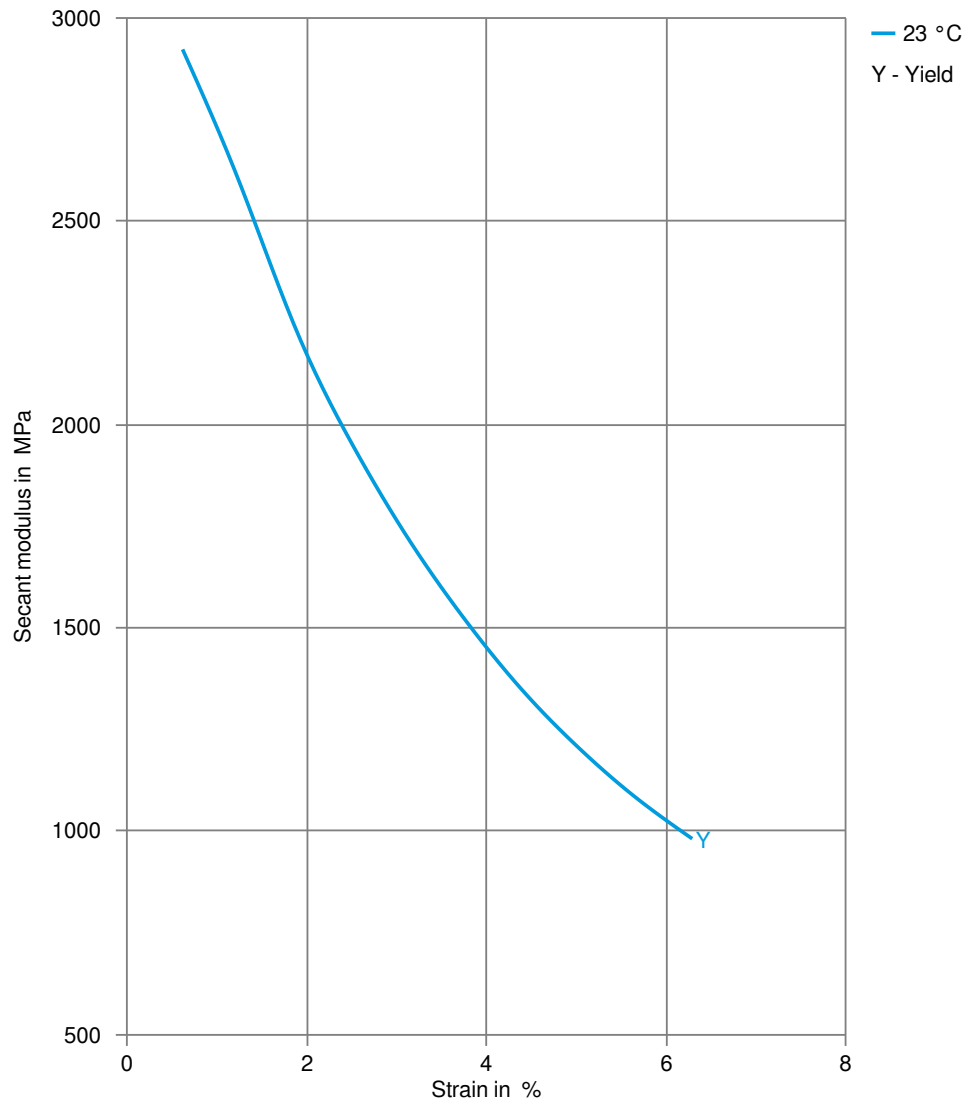
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## Stress-strain



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## Secant modulus-strain



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## Processing Texts

Pre-drying	It is normally not necessary to dry HOSTAFORM. However, should there be surface moisture (condensate) on the molding compound as a result of incorrect storage, drying is required. A circulating air drying cabinet can be used for this purpose if the granules
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.