

TECHNICAL DATA SHEET

XANTAR™ G4F 23 R

Mitsubishi EP
 PC-GF20 FR

Processing

Injection molding

Delivery Form

Pellets

Additives

Release agent

Special Characteristics

Flame retardant, Heat stabilized or stable to heat

Product Text

Product Information

20% Glass Reinforced, Flame Retardant

ISO 1043 PC-GF20 FR

XANTAR Polycarbonate & Blends, your global partner for innovative added value

Processing/Physical Characteristics	Value	Unit	Standard
Melt volume-flow rate, MVR	6	cm ³ /10min	ISO 1133
Temperature	300	°C	
Load	1.2	kg	
Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5	%	ISO 294-4, 2577
Density of melt	1170	kg/m ³	
Thermal conductivity of melt	0.29	W/(m K)	
Spec. heat capacity of melt	1530	J/(kg K)	
Eff. thermal diffusivity	1.62E-7	m ² /s	
Ejection temperature	134	°C	
Mechanical Properties	Value	Unit	Standard
Tensile modulus	6000	MPa	ISO 527
Stress at break	95	MPa	ISO 527
Strain at break	4	%	ISO 527
Poisson's ratio	0.35		ISO 527
Puncture - maximum force, +23°C	900	N	ISO 6603-2

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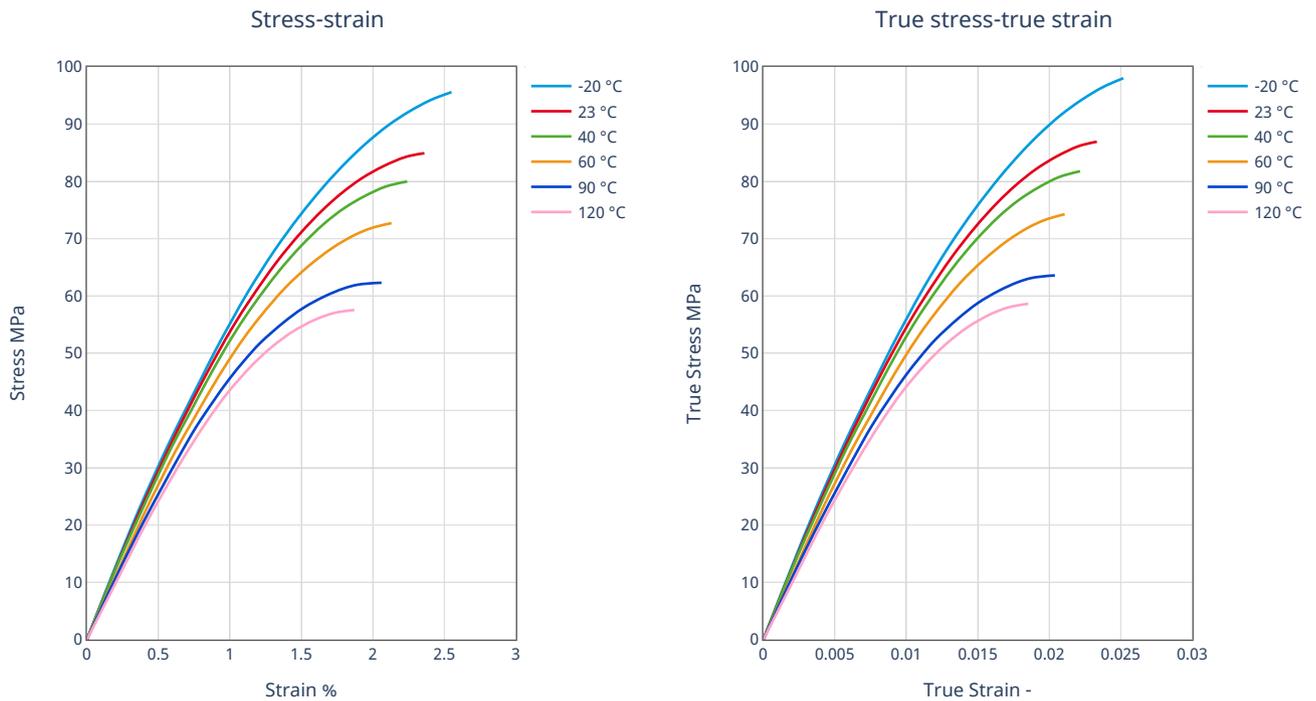
Mechanical Properties	Value	Unit	Standard
Puncture - maximum force, -30°C	900	N	ISO 6603-2
Puncture energy, +23°C	6	J	ISO 6603-2
Puncture energy, -30°C	4	J	ISO 6603-2
Thermal Properties	Value	Unit	Standard
Temp. of deflection under load, 1.80 MPa	145	°C	ISO 75-1/-2
Vicat softening temperature, B	150	°C	ISO 306
Coeff. of linear therm. expansion, parallel	30	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	
Yellow card available	yes		
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	1.2	mm	
Yellow card available	yes		
Oxygen index	35	%	ISO 4589-1/-2
Electrical Properties	Value	Unit	Standard
Relative permittivity, 100Hz	3.25		IEC 62631-2-1
Relative permittivity, 1MHz	3.2		IEC 62631-2-1
Dissipation factor, 100Hz	9	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	90	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	29	kV/mm	IEC 60243-1
Comparative tracking index	200		IEC 60112
Other Properties	Value	Unit	Standard
Water absorption	0.29	%	Sim. to ISO 62
Density	1350	kg/m ³	ISO 1183
Test Specimen Production	Value	Unit	Standard
Injection molding, melt temperature	300	°C	ISO 294
Injection molding, mold temperature	100	°C	ISO 294
Processing Recommendation Injection Molding	Value	Unit	Standard
Pre-drying - temperature	120	°C	

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Processing Recommendation Injection Molding	Value	Unit	Standard
Pre-drying - time	4	h	
Processing humidity	≤0.03	%	
Melt temperature	290 - 320	°C	
Mold temperature	80 - 120	°C	
Zone 1	260 - 280	°C	
Zone 2	270 - 290	°C	
Zone 3	280 - 300	°C	
Nozzle temperature	270 - 290	°C	

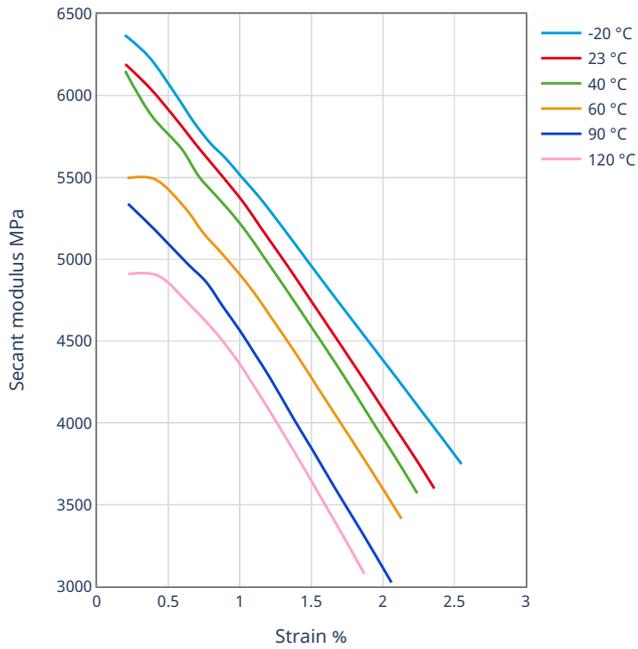
Diagrams



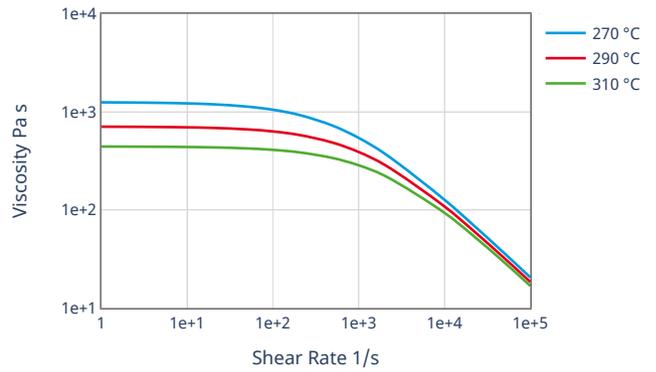
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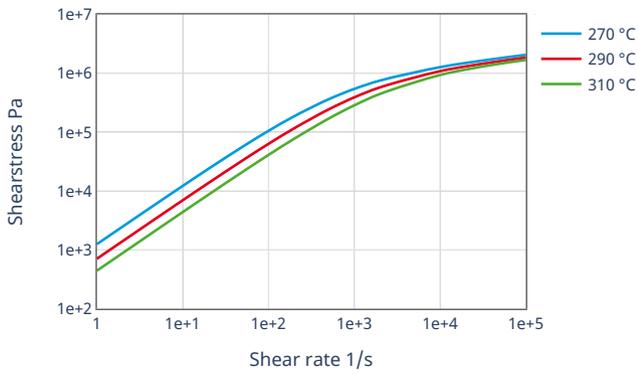
Secant modulus-strain



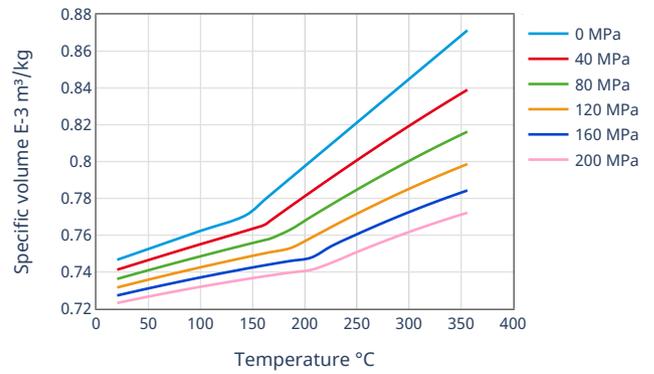
Viscosity-shear rate



Shearstress-shear rate



Spec. volume-Temperature (pVT)



Processing Information

Injection molding

Injection Molding Recommendations