XANTAR® G4F 22 R

PC-GF20 FR — Mitsubishi Engineering-Plastics Corporation

Product Texts

20% Glass Reinforced, Flame Retardant

ISO 1043 PC-GF20 FR

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

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	8	cm³/10min	ISO 1133
Temperature	300	°C	ISO 1133
Load	1.2	kg	ISO 1133
Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	6000	MPa	ISO 527-1/-2
Stress at break	90	MPa	ISO 527-1/-2
Strain at break	4	%	ISO 527-1/-2

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	145	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	150	°C	ISO 306
Coeff. of linear therm. expansion, parallel	25	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	IEC 60695-11-10
UL recognition	UL	-	-
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	1.2	mm	IEC 60695-11-10
UL recognition	UL	-	-
Oxygen index	35	%	ISO 4589-1/-2

Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.25	-	IEC 60250
Relative permittivity, 1MHz	3.2	-	IEC 60250
Dissipation factor, 100Hz	9	E-4	IEC 60250
Dissipation factor, 1MHz	90	E-4	IEC 60250
Volume resistivity	>1E13	Ohm*m	IEC 60093
Surface resistivity	>1E15	Ohm	IEC 60093
Electric strength	29	kV/mm	IEC 60243-1
Comparative tracking index	200	-	IEC 60112

Other properties	Value	Unit	Test Standard
ISO Data			
Water absorption	0.29	%	Sim. to ISO 62
Density	1350	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1170	kg/m³	-
Thermal conductivity of melt	0.29	W/(m K)	-

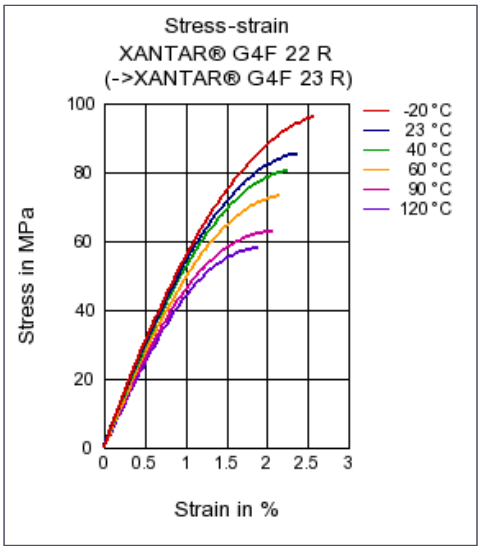
Our product information and suggestions are based on analyses, empirical values, and data from the product manufacturer in question and are therefore provided with our best knowledge and accountability. We do not, however, assume any liability or warranty, be it for defects in title, quality and suitability of the products for a specific purpose, or non-infringement of industrial property rights. We do not warrant the use or processing of the products and information, or consequences of any kind arising from product descriptions, suggestions, and recommendations. The responsibility for appropriate usage, as well as final suitability testing of the raw material is exclusively the responsibility of the customer as part of sampling/final qualification of a manufactured molded part. The specified data are only indicative and are not to be interpreted as legally binding specifications.

Spec. heat capacity of melt	1530	J/(kg K)	-
Eff. thermal diffusivity	1.62E-7	m²/s	-
Ejection temperature	134	°C	-

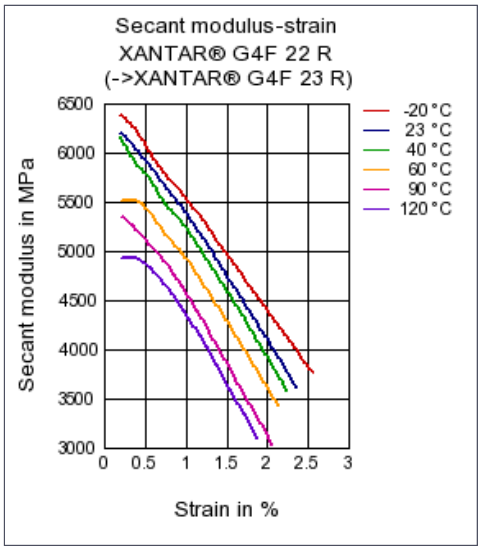
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	300	°C	ISO 294
Injection Molding, mold temperature	100	°C	ISO 10724

Diagrams

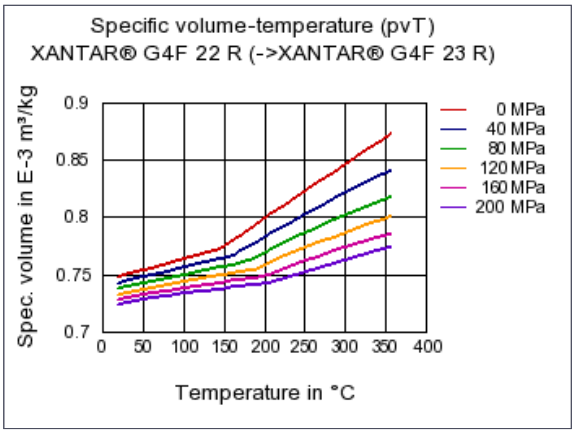
Stress-strain



Secant modulus-strain



Specific volume-temperature (pvT)



Characteristics

Processing
Injection Molding

Additives
Release agent

Delivery form
Pellets

Special Characteristics
Flame retardant, Heat stabilized or stable to heat

Other text information

Injection Molding
Injection Molding Recommendations

Our product information and suggestions are based on analyses, empirical values, and data from the product manufacturer in question and are therefore provided with our best knowledge and accountability. We do not, however, assume any liability or warranty, be it for defects in title, quality and suitability of the products for a specific purpose, or non-infringement of industrial property rights. We do not warrant the use or processing of the products and information, or consequences of any kind arising from product descriptions, suggestions, and recommendations. The responsibility for appropriate usage, as well as final suitability testing of the raw material is exclusively the responsibility of the customer as part of sampling/final qualification of a manufactured molded part. The specified data are only indicative and are not to be interpreted as legally binding specifications.

Chemical Media Resistance

Acids

- Acetic Acid (5% by mass) (23°C)
- Citric Acid solution (10% by mass) (23°C)
- Lactic Acid (10% by mass) (23°C)
- Hydrochloric Acid (36% by mass) (23°C)
- Nitric Acid (40% by mass) (23°C)
- Sulfuric Acid (38% by mass) (23°C)
- Sulfuric Acid (5% by mass) (23°C)
- Chromic Acid solution (40% by mass) (23°C)

Bases

- Sodium Hydroxide solution (35% by mass) (23°C)
- Sodium Hydroxide solution (1% by mass) (23°C)
- Ammonium Hydroxide solution (10% by mass) (23°C)

Alcohols

- Isopropyl alcohol (23°C)
- Methanol (23°C)
- Ethanol (23°C)

Hydrocarbons

- n-Hexane (23°C)
- Toluene (23°C)
- iso-Octane (23°C)

Ketones

- Acetone (23°C)

Ethers

- Diethyl ether (23°C)

Salt solutions

- Sodium Chloride solution (10% by mass) (23°C)
- Sodium Hypochlorite solution (10% by mass) (23°C)
- Sodium Carbonate solution (20% by mass) (23°C)
- Sodium Carbonate solution (2% by mass) (23°C)
- Zinc Chloride solution (50% by mass) (23°C)

Other

- Ethyl Acetate (23°C)
- Hydrogen peroxide (23°C)
- Water (23°C)
- Phenol solution (5% by mass) (23°C)

Our product information and suggestions are based on analyses, empirical values, and data from the product manufacturer in question and are therefore provided with our best knowledge and accountability. We do not, however, assume any liability or warranty, be it for defects in title, quality and suitability of the products for a specific purpose, or non-infringement of industrial property rights. We do not warrant the use or processing of the products and information, or consequences of any kind arising from product descriptions, suggestions, and recommendations. The responsibility for appropriate usage, as well as final suitability testing of the raw material is exclusively the responsibility of the customer as part of sampling/final qualification of a manufactured molded part. The specified data are only indicative and are not to be interpreted as legally binding specifications.