


XANTAR® F 23 R
PC FR

Mitsubishi Engineering-Plastics Corporation

Product Texts

Medium Viscosity, Flame Retardant, Molding Release

ISO 1043 PC FR

[XANTAR® Polycarbonate & Blends, your global partner for innovative added value](#)

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	7	cm³/10min	ISO 1133
Temperature	300	°C	ISO 1133
Load	1.2	kg	ISO 1133
Molding shrinkage, parallel	0.6	%	ISO 294-4, 2577
Mechanical properties			
ISO Data			
Tensile Modulus	2300	MPa	ISO 527-1/-2
Yield stress	60	MPa	ISO 527-1/-2
Yield strain	6	%	ISO 527-1/-2
Nominal strain at break	>50	%	ISO 527-1/-2
Thermal properties			
ISO Data			
Temp. of deflection under load (1.80 MPa)	130	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	148	°C	ISO 306
Coeff. of linear therm. expansion, parallel	65	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	V-2	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	3.0	mm	IEC 60695-11-10
UL recognition	UL	-	-
Oxygen index	35	%	ISO 4589-1/-2
Electrical properties			
ISO Data			
Relative permittivity, 100Hz	3	-	IEC 60250
Relative permittivity, 1MHz	2.9	-	IEC 60250
Dissipation factor, 100Hz	6.6	E-4	IEC 60250
Dissipation factor, 1MHz	92	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	225	-	IEC 60112
Other properties			
ISO Data			
Water absorption	0.35	%	Sim. to ISO 62
Density	1200	kg/m³	ISO 1183
Material specific properties			
ISO Data			
Viscosity number	58	cm³/g	ISO 307, 1157, 1628

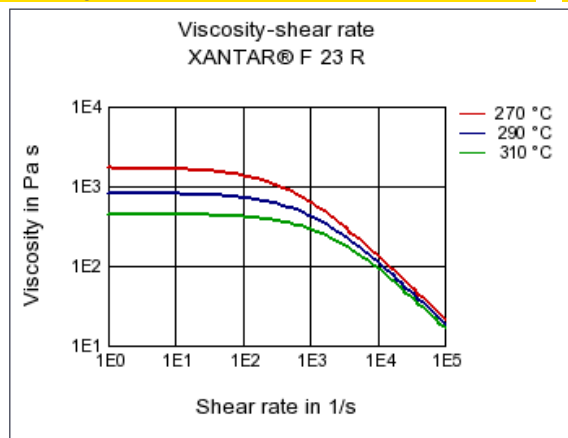
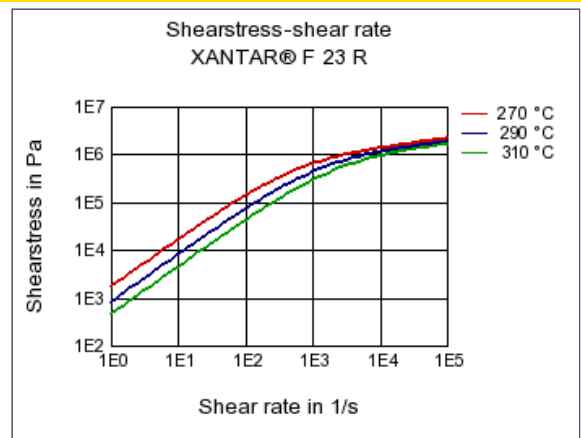
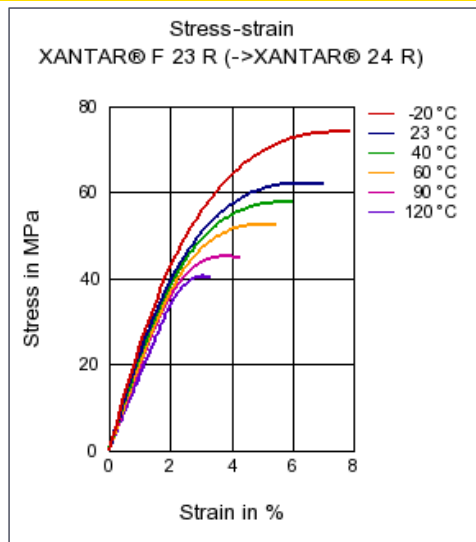
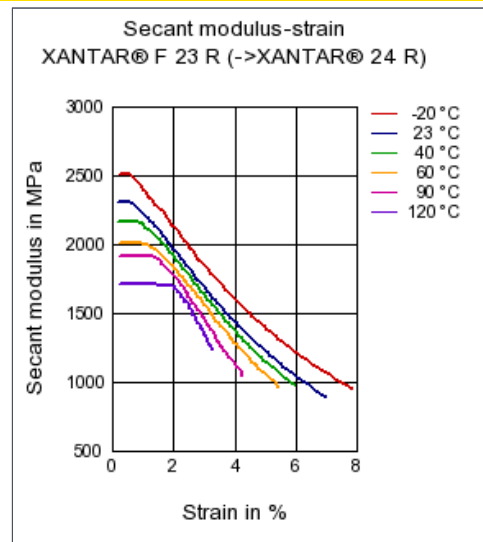
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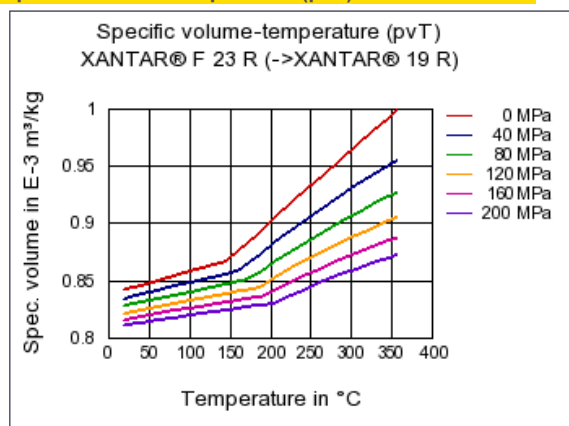
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Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1010	kg/m ³	-
Thermal conductivity of melt	0.24	W/(m K)	-
Spec. heat capacity of melt	1710	J/(kg K)	-
Eff. thermal diffusivity	1.4E-7	m ² /s	-
Ejection temperature	131	°C	-

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	300	°C	ISO 294
Injection Molding, mold temperature	90	°C	ISO 10724

Diagrams**Viscosity-shear rate****Shearstress-shear rate****Stress-strain****Secant modulus-strain**

Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding, Blow Molding

Additives

Release agent

Delivery form

Pellets

Special Characteristics

Flame retardant, Heat stabilized or stable to heat,
Transparent

Other text information

Injection Molding

[Injection Molding Recommendations](#)

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)