

DSM Engineering Plastics - Property Data

Xantar® G4F 23 UR

PC-GF20

20% Glass Reinforced, Flame Retardant, UV Stabilized

Properties	Typical Data	Unit	Test Method
RHEOLOGICAL PROPERTIES			
Melt volume-flow rate	6	cm ³ /10min	ISO 1133
Temperature	300	°C	ISO 1133
Load	1.2	kg	ISO 1133
Molding shrinkage (parallel)	0.2	%	ISO 294-4
Molding shrinkage (normal)	0.5	%	ISO 294-4
MECHANICAL PROPERTIES			
Tensile modulus	6000	MPa	ISO 527-1/-2
Stress at break	95	MPa	ISO 527-1/-2
Strain at break	4	%	ISO 527-1/-2
Flexural modulus	5500	MPa	ISO 178
Flexural strength	145	MPa	ISO 178
Izod notched impact strength (23°C)	10	kJ/m ²	ISO 180/4A
Rockwell hardness, M scale	91	-	ISO 2039-2
THERMAL PROPERTIES			
Temp. of deflection under load (1.80 MPa)	147	°C	ISO 75-1/-2
Vicat softening temperature (50°C/h 50N)	150	°C	ISO 306
Coeff. of linear therm. expansion (parallel)	0.3	E-4/°C	ISO 11359-1/-2
Burning Behav. at 1.6 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	1.2	mm	IEC 60695-11-10
Oxygen index	35	%	ISO 4589-1/-2
Ball pressure temperature	125	°C	IEC 60695-10-2
Glow Wire Flammability Index GWFI	960	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	1.5	mm	IEC 60695-2-12
Glow Wire Flammability Index GWFI	960	°C	IEC 60695-2-12
GWFI (Thickness (2) tested)	3	mm	IEC 60695-2-12
Glow Wire Ignition Temperature GWIT	850	°C	IEC 60695-2-13
GWIT (Thickness (1) tested)	1.5	mm	IEC 60695-2-12
Glow Wire Ignition Temperature GWIT	875	°C	IEC 60695-2-13
GWIT (Thickness (2) tested)	3	mm	IEC 60695-2-12
Relative Temperature Index - electrical	130	°C	UL746B
RTI electrical (Thickness (1) tested)	1.5	mm	UL746B
Relative Temperature Index - electrical	130	°C	UL746B
RTI electrical (Thickness (2) tested)	3	mm	UL746B
Relative Temperature Index - with impact	125	°C	UL746B
RTI with impact (Thickness (1) tested)	1.5	mm	UL746B
Relative Temperature Index - with impact	130	°C	UL746B
RTI with impact (Thickness (2) tested)	3	mm	UL746B

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Relative Temperature Index - without impact	125	°C	UL746B
RTI without impact (Thickness (1) tested)	1.5	mm	UL746B
Relative Temperature Index - without impact	130	°C	UL746B
RTI without impact (Thickness (2) tested)	3	mm	UL746B

ELECTRICAL PROPERTIES

Relative permittivity (100Hz)	3.25	-	IEC 60250
Relative permittivity (1 MHz)	3.2	-	IEC 60250
Dissipation factor (100 Hz)	9	E-4	IEC 60250
Dissipation factor (1 MHz)	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
Comparative tracking index (PLC)	3	class	UL 746A

OTHER PROPERTIES

Water absorption	0.29	%	Sim. to ISO 62
Density	1350	kg/m³	ISO 1183

MATERIAL SPECIFIC PROPERTIES

Limiting Viscosity Number	48	cm³/g	ISO 1628-4
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RHEOLOGICAL CALCULATION PROPERTIES

Thermal conductivity of melt	0.29	W/(m K)	-
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