DSM Engineering Plastics - Property Data

Xantar® G4F 22 UR

PC-GF20

20% Glass Reinforced, Flame Retardant, UV Stabilized

Properties	Typical Data	Unit	Test Method
RHEOLOGICAL PROPERTIES			
Melt volume-flow rate	**8**	cm³/10min	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	**90**	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/m²	ISO 180/4A
Rockwell hardness, M scale	**91**	-	ISO 2039-2
THERMAL PROPERTIES			
Temp. of deflection under load (1.80 MPa)	**145**	°C	ISO 75-1/-2
Vicat softening temperature (50°C/h 50N)	**152**	°C	ISO 306
Coeff. of linear therm. expansion (parallel)	**0.25**	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	**45**	cm³/g	ISO 1628-4
RHEOLOGICAL CALCULATION PROPERTIES			
Thermal conductivity of melt	**0.29**	W/(m K)	-

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