

# DSM Engineering Plastics - Property Data

## Xantar<sup>®</sup> MX 1082

PC-GF20

20% Glass Reinforced, Flame Retardant, Steam Resistant

Properties	Typical Data	Unit	Test Method
<b>RHEOLOGICAL PROPERTIES</b>			
Melt volume-flow rate	<b>3</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>300</b>	°C	ISO 1133
Load	<b>1.2</b>	kg	ISO 1133
Molding shrinkage (parallel)	<b>0.2</b>	%	ISO 294-4
Molding shrinkage (normal)	<b>0.5</b>	%	ISO 294-4
<b>MECHANICAL PROPERTIES</b>			
Tensile modulus	<b>6000</b>	MPa	ISO 527-1/-2
Stress at break	<b>90</b>	MPa	ISO 527-1/-2
Strain at break	<b>4</b>	%	ISO 527-1/-2
Flexural modulus	<b>5500</b>	MPa	ISO 178
Flexural strength	<b>145</b>	MPa	ISO 178
Izod notched impact strength (23°C)	<b>10</b>	kJ/m <sup>2</sup>	ISO 180/4A
Rockwell hardness, M scale	<b>91</b>	-	ISO 2039-2
<b>THERMAL PROPERTIES</b>			
Temp. of deflection under load (1.80 MPa)	<b>147</b>	°C	ISO 75-1/-2
Vicat softening temperature (50°C/h 50N)	<b>150</b>	°C	ISO 306
Coeff. of linear therm. expansion (parallel)	<b>0.25</b>	E-4/°C	ISO 11359-1/-2
Burning Behav. at 1.6 mm nom. thickn.	<b>V-0</b>	class	IEC 60695-11-10
Thickness tested	<b>1.5</b>	mm	IEC 60695-11-10
Burning Behav. at thickness h	<b>V-0</b>	class	IEC 60695-11-10
Thickness tested	<b>1.2</b>	mm	IEC 60695-11-10
Oxygen index	<b>33</b>	%	ISO 4589-1/-2
Ball pressure temperature	<b>125</b>	°C	IEC 60695-10-2
Glow Wire Flammability Index GWFI	<b>960</b>	°C	IEC 60695-2-12
GWFI (Thickness (1) tested)	<b>1.5</b>	mm	IEC 60695-2-12
Glow Wire Flammability Index GWFI	<b>960</b>	°C	IEC 60695-2-12
GWFI (Thickness (2) tested)	<b>3</b>	mm	IEC 60695-2-12
Glow Wire Ignition Temperature GWIT	<b>850</b>	°C	IEC 60695-2-13
GWIT (Thickness (1) tested)	<b>1.5</b>	mm	IEC 60695-2-12
Glow Wire Ignition Temperature GWIT	<b>875</b>	°C	IEC 60695-2-13
GWIT (Thickness (2) tested)	<b>3</b>	mm	IEC 60695-2-12
Relative Temperature Index - electrical	<b>130</b>	°C	UL746B
RTI electrical (Thickness (1) tested)	<b>1.5</b>	mm	UL746B
Relative Temperature Index - electrical	<b>130</b>	°C	UL746B
RTI electrical (Thickness (2) tested)	<b>3</b>	mm	UL746B
Relative Temperature Index - with impact	<b>125</b>	°C	UL746B
RTI with impact (Thickness (1) tested)	<b>1.5</b>	mm	UL746B
Relative Temperature Index - with impact	<b>130</b>	°C	UL746B
RTI with impact (Thickness (2) tested)	<b>3</b>	mm	UL746B

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

### ELECTRICAL PROPERTIES

Relative permittivity (100Hz)	<b>3.25</b>	-	IEC 60250
Relative permittivity (1 MHz)	<b>3.2</b>	-	IEC 60250
Dissipation factor (100 Hz)	<b>9</b>	E-4	IEC 60250
Dissipation factor (1 MHz)	<b>90</b>	E-4	IEC 60250
Volume resistivity	<b>&gt;1E13</b>	Ohm*m	IEC 60093
Surface resistivity	<b>&gt;1E15</b>	Ohm	IEC 60093
Electric strength	<b>29</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>200</b>	-	IEC 60112
Comparative tracking index (PLC)	<b>3</b>	class	UL 746A

### OTHER PROPERTIES

Water absorption	<b>0.29</b>	%	Sim. to ISO 62
Density	<b>1350</b>	kg/m <sup>3</sup>	ISO 1183

### MATERIAL SPECIFIC PROPERTIES

Limiting Viscosity Number	<b>56</b>	cm <sup>3</sup> /g	ISO 1628-4
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