

**Product Texts**

20% Glass Reinforced, Heat Stabilized, Flame Retardant (halogen- phosphorous-free)

ISO 1043 PA6-GF20 FR(30)

<b>Processing/Physical Characteristics</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Molding shrinkage, parallel	<b>0.6 / *</b>	%	ISO 294-4, 2577
<sup>[C]</sup> Molding shrinkage, normal	<b>1.0 / *</b>	%	ISO 294-4, 2577
<sup>[C]</sup> Density of melt	<b>1030</b>	kg/m <sup>3</sup>	-
<sup>[C]</sup> Thermal conductivity of melt	<b>0.29</b>	W/(m K)	-
<sup>[C]</sup> Spec. heat capacity of melt	<b>2270</b>	J/(kg K)	-
<sup>[C]</sup> Eff. thermal diffusivity	<b>1.25E-7</b>	m <sup>2</sup> /s	-

[C]: CAMPUS

<b>Mechanical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	<b>6000 / 2500</b>	MPa	ISO 527
<sup>[C]</sup> Stress at break	<b>85 / 45</b>	MPa	ISO 527
<sup>[C]</sup> Strain at break	<b>3.6 / 15</b>	%	ISO 527
<sup>[C]</sup> Charpy impact strength, +23°C	<b>45 / 110</b>	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy impact strength, -30°C	<b>35 / 35</b>	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy notched impact strength, +23°C	<b>3.3 / 7</b>	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Charpy notched impact strength, -30°C	<b>3 / 3</b>	kJ/m <sup>2</sup>	ISO 179/1eA

[C]: CAMPUS

<b>Thermal properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	<b>220 / *</b>	°C	ISO 11357-1/-3
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	<b>140 / *</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	<b>210 / *</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Burning Behav. at 1.5 mm nom. thickn.	<b>V-2 / *</b>	class	IEC 60695-11-10
Thickness tested	<b>1.5 / *</b>	mm	-
Yellow Card available	<b>yes / *</b>	-	-
<sup>[C]</sup> Burning Behav. at thickness h	<b>V-2 / *</b>	class	IEC 60695-11-10
Thickness tested	<b>3.0 / *</b>	mm	-
Yellow Card available	<b>yes / *</b>	-	-

[C]: CAMPUS

<b>Electrical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Relative permittivity, 100Hz	<b>4.3 / 10</b>	-	IEC 62631-2-1
<sup>[C]</sup> Relative permittivity, 1MHz	<b>3.8 / 3.9</b>	-	IEC 62631-2-1
<sup>[C]</sup> Dissipation factor, 100Hz	<b>130 / 3000</b>	E-4	IEC 62631-2-1
<sup>[C]</sup> Dissipation factor, 1MHz	<b>210 / 1000</b>	E-4	IEC 62631-2-1
<sup>[C]</sup> Volume resistivity	<b>1E13 / 1E11</b>	Ohm*m	IEC 62631-3-1
<sup>[C]</sup> Surface resistivity	<b>* / 1E14</b>	Ohm	IEC 62631-3-2
<sup>[C]</sup> Electric strength	<b>30 / 25</b>	kV/mm	IEC 60243-1
<sup>[C]</sup> Comparative tracking index	<b>575 / *</b>	-	IEC 60112

[C]: CAMPUS

<b>Other properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<sup>[C]</sup> Water absorption	<b>6.5 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	<b>2 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1340 / -</b>	kg/m <sup>3</sup>	ISO 1183

[C]: CAMPUS

**Characteristics**

**Processing**

Injection Molding

**Delivery form**

Pellets

**Additives**

Release agent

**Special Characteristics**

Flame retardant, Halogen-free, Phosphorus-free, Heat stabilized or stable to heat

**Regional Availability**

Europe, Asia Pacific

**Other text information**

**Injection molding**

[Injection Molding Recommendations](#)

[Steel recommendations for molds screws and barrels](#)

[Trouble shooting guideline for injection molding](#)