

**Product Texts**

Celanex XFR 6842 GF10 is a halogen and antimony free flame retardant (V-0 @ 0.4 mm) 10% glass reinforced PBT grade with good processability and no corrosive emissions during processing. It is suitable for parts requiring enhanced tracking resistance, toughness, and flame retardancy at < 0.75 mm wall thickness. The product is WEEE and RoHS compliant.

Flammability at thickness h (0.4 V-0 mm)

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Melt volume-flow rate, MVR	10	cm <sup>3</sup> /10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
<sup>[C]</sup> Molding shrinkage, parallel	1.2	%	ISO 294-4, 2577
<sup>[C]</sup> Molding shrinkage, normal	1.1	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	5300	MPa	ISO 527
<sup>[C]</sup> Stress at break	70	MPa	ISO 527
<sup>[C]</sup> Strain at break	3.4	%	ISO 527
<sup>[C]</sup> Charpy impact strength, +23°C	30	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy notched impact strength, +23°C	4.2	kJ/m <sup>2</sup>	ISO 179/1eA

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	173	°C	ISO 75-1/-2
<sup>[C]</sup> Vicat softening temperature, B	205	°C	ISO 306
<sup>[C]</sup> Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.4	mm	-

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Relative permittivity, 1MHz	2.9	-	IEC 62631-2-1
<sup>[C]</sup> Dissipation factor, 1MHz	140	E-4	IEC 62631-2-1
<sup>[C]</sup> Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
<sup>[C]</sup> Surface resistivity	>1E15	Ohm	IEC 62631-3-2

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
<sup>[C]</sup> Density	1400	kg/m <sup>3</sup>	ISO 1183

[C]: CAMPUS

**Characteristics**

**Processing**

Injection Molding

**Delivery form**

Pellets

**Special Characteristics**

Flame retardant, Halogen-free

**Certifications**

RoHS compliant

**Other text information****Injection molding**

To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°F (-40°C) at 250-285°F (120-140°C) for 4-6 hours.

Melt Temperature. 250-265 °C

Mold Temperature \*): 75-90 °C

Maximum Barrel Residence Time \*\*): 5-10 min

Injection Speed: high

Peripheral screw speed: max.0,25 m/sec

Back Pressure: 10-30 bar

Injection Pressure: 600-1000 bar

Holding Pressure: 400-800 bar

Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided. For grades containing flame retardants, a maximum temperature of 265 °C should not be exceeded.

Ticona recommends only externally heated hot runner systems.

\*) For moulded parts with especially high requirements to the surface quality or dimensional stability, a mold temperature of up to 100 °C can be advantageous.

\*\*) If the cylinder temperatures are higher than the recommended maximum temperatures, the max. residence time in the barrel has to be reduced.