CELANEX® XFR 6842 GF30

PBT-GF30 Celanese

Product Texts

Celanex XFR 6842 GF30 is a halogen and antimony free flame retardant (V-0 @ 0.4 mm) 30% 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 and It is well suited for electrical connector applications where its UL approved 50% regrind use capability allows maximum use of purchased product.. The product is WEEE and RoHS compliant.

Flammability @1.6mm nom. thickn.	V-0	-
Flammability @0.8mm nom. thickn.	V-0	UL recognition (0.8)
Flammability @0.4mm nom. thickn.	V-0	UL recognition (0.4)
Flammability at thickness h (0.4 mm)	V-0	UL recognition (h)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**18**	cm³/10min	ISO 1133
Temperature	**250**	°C	-
Load	**5**	kg	-
[C] Molding shrinkage, parallel	**0.4**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.9**	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**10000**	MPa	ISO 527
[C] Stress at break	**102**	MPa	ISO 527
[C] Strain at break	**2**	%	ISO 527
[C] Charpy impact strength, +23°C	**35**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**6.9**	kJ/m²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**225**	°C	ISO 11357-1/-3
[C] Temp. of deflection under load, 1.80 MPa	**203**	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**207**	°C	ISO 306
[C] Burning Behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10
[C] Burning Behav. at thickness h	**V-0**	class	IEC 60695-11-10
Thickness tested	**0.4**	mm	-
Yellow Card available	**yes**	-	-
[C] Burning Behav. 5V at thickness h	**5VA**	class	IEC 60695-11-20
Thickness tested	**1.5**	mm	-
Yellow Card available	**yes**	-	-

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 1MHz	**3.6**	-	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**140**	E-4	IEC 62631-2-1
[C] Volume resistivity	**>1E13**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	**>1E15**	Ohm	IEC 62631-3-2

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Humidity absorption	**0.2**	%	Sim. to ISO 62
[C] Density	**1530**	kg/m³	ISO 1183

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**120 - 140**	°C	-
Pre-drying - Time	**2 - 4**	h	-
Processing humidity	**≤0.02**	%	-
Melt temperature	**250 - 265**	°C	-
Mold temperature	**75 - 90**	°C	-

Characteristics

Processing
Injection Molding

Delivery form
Pellets

Special Characteristics
Flame retardant, Halogen-free

Features
Low Emission

Certifications
RoHS compliant

Regional Availability
North America, Europe

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.