Celanese
The chemistry inside innovation™

CELANEX® XFR 6842 GF30 HRCT (PRELIMINARY)

Halogen-free, nom. 30% glass-fiber reinforced, flame retardant grade with improved hydrolysis resistance and high CTI
Celanex XFR 6842 GF30 HRCT is a halogen and antimony free flame retardant glass fiber reinforced PBT grade with good processability and excellent hydrolysis resistance. It is suitable for parts requiring enhanced electrical tracking resistance (CTI 600V), toughness, and flame retardancy. The product is WEEE and RoHS compliant.

Rheological properties

Melt volume-flow rate	8	cm^3/10min	ISO 1133
Temperature	250	°C	
Load	5	kg	

Typical mechanical properties

Tensile Modulus	10000	MPa	ISO 527-1/-2
Stress at break, 5mm/min	110	MPa	ISO 527-1/-2
Strain at break, 5mm/min	2	%	ISO 527-1/-2
Charpy impact strength, 23°C	40	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	8.5	kJ/m^2	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0	class	UL 94
Burning Behav. at thickness h	V-0	class	UL 94
Thickness tested	0.4	mm	UL 94
UL recognition	yes		UL 94

Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62

Injection

Drying Temperature	140 - 120	°C
Drying Time, Dehumidified Dryer	4 - 6	h
Processing Moisture Content	0.01	%
Max. regrind level	25	%
Max. mould temperature	80 - 100	°C
Hold pressure range	40 - 120	MPa
Back pressure	3	MPa
Injection speed	fast	

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Characteristics

Additives	Release agent, Flame retardant

Additional information

Injection molding	Melt Temperature. 255-270 °C Mold Temperature *): 80-100 °C Maximum Barrel Residence Time **): 5 min Injection Speed: high Peripheral screw speed: max. 0.25 m/sec Back Pressure: 10-30 bar Injection Pressure: 600-1500 bar Holding Pressure: 400-1200 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 270 °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 120 °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.

Processing Texts

Pre-drying	To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level of less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°F (-40°C) at 250-285°F (140 - 120°C) for 4 - 6 hours.
Longer pre-drying times/storage	For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to < 100° C.
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