

Product Texts

Celanex XFR 4840 is an unreinforced, flame retardant PBT grade featuring a halogen and antimony free flame retardant system. It is UL certified to be V-0 at 0.8 mm in all colors. Our proprietary flame retardant system enables a combination of excellent mechanical properties, flame retardant efficiency and processability. The product is WEEE and RoHS compliant.

Flammability at thickness h (0.8 V-0 mm)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	10	cm ³ /10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	2.0	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.7	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	3250	MPa	ISO 527
^[C] Charpy impact strength, +23°C	32	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	3	kJ/m ²	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	70	°C	ISO 75-1/-2
^[C] Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.8	mm	-

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Density	1340	kg/m ³	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	235 - 255	°C	-
Mold temperature	65 - 93	°C	-

Characteristics

Processing

Injection Molding

Certifications

RoHS compliant

Delivery form

Pellets

Regional Availability

North America, Europe

Special Characteristics

Flame retardant, Halogen-free

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.

Rear Temperature 450-470 (230-240) deg F (°C)

Center Temperature 460-480 (235-250) deg F (°C)

Front Temperature 470-490 (240-255) deg F (°C)

Nozzle Temperature 480-490 (250-255) deg F (°C)

Melt Temperature 460-490 (235-255) deg F (°C)

Mold Temperature 150-200 (65-93) deg F (°C)

Back Pressure 0-50 psi

Screw Speed Medium

Injection Speed Fast

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, in particular for flame retardant grades. Up to 25% clean and dry regrind may be used for the XFR series' halogen-free flame retardant grades.