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CELANEX® XFR 4842HP (PRELIMINARY)

Halogen-free, flame retardant (UL94 V-0 @0.4mm), unreinforced grade
Celanex XFR 4842HP 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 0.4 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.

Product information

Part Marking Code	> PBT FR(30+40) <	ISO 11469

Rheological properties

Melt mass-flow rate	6.5	g/10min	ISO 1133
Melt mass-flow rate, Temperature	250	°C	
Melt mass-flow rate, Load	2.16	kg	

Typical mechanical properties

Tensile Modulus	3600	MPa	ISO 527-1/-2
Stress at break, 50mm/min	42	MPa	ISO 527-1/-2
Strain at break, 50mm/min	6	%	ISO 527-1/-2

Thermal properties

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

Flammability

Burning Behav. at thickness h	V-0	class	UL 94
Thickness tested	0.40	mm	UL 94
UL recognition	yes		UL 94

Electrical properties

Comparative tracking index	PLC 0	PLC	UL 746A

Characteristics

Additives	Flame retardant

Additional information

Injection molding	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

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	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.

Processing Texts

Pre-drying	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.
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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