Celanese
The chemistry inside innovation™

CELANEX® 3316A

30% glass-fiber reinforced, easy flowing, flame retardant (UL94 V-0) grade
Celanex 3316A is a non-exuding, well flowing, flame retarded (UL approved V-0 at 1/16 inch), 30% fiberglass reinforced polybutylene terephthalate which has an excellent balance of mechanical properties and processability.

Product information

Part Marking Code	> PBT-GF30 FR(17) <	ISO 11469

Rheological properties

Melt volume-flow rate	13	cm^3/10min	ISO 1133
Temperature	250	°C	
Load	2.16	kg	

Typical mechanical properties

Tensile Modulus	10700	MPa	ISO 527-1/-2
Stress at break, 5mm/min	145	MPa	ISO 527-1/-2
Strain at break, 5mm/min	2.5	%	ISO 527-1/-2
Flexural Modulus	10300	MPa	ISO 178
Flexural Strength	200	MPa	ISO 178
Charpy impact strength, 23°C	59	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	59	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	9.5	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	9	kJ/m^2	ISO 179/1eA

Thermal properties

Temp. of deflection under load, 1.8 MPa	209	°C	ISO 75-1/-2

Electrical properties

Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2

Other properties

Density	1670	kg/m^3	ISO 1183

Injection

Drying Temperature	120 - 130	°C
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	0.02	%
Max. mould temperature	65 - 93	°C
Injection speed	medium-fast	

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Characteristics

Additives	Flame retardant

Additional information

Injection molding	Rear Temperature 450-470(230-240) deg F (deg C) Center Temperature 460-480(235-250) deg F (deg C) Front Temperature 470-490(240-255) deg F (deg C) Nozzle Temperature 480-490(250-255) deg F (deg C) Melt Temperature 460-490(235-255) deg F (deg C) Mold Temperature 150-200(65-93) deg F (deg 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 50% clean and dry regrind may be used for the '16 series' 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°F (121°C) for 4 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.
Injection molding	Rear Temperature 450-470(230-240) deg F (deg C) Center Temperature 460-480(235-250) deg F (deg C) Front Temperature 470-490(240-255) deg F (deg C) Nozzle Temperature 480-490(250-255) deg F (deg C) Melt Temperature 460-490(235-255) deg F (deg C) Mold Temperature 150-200(65-93) deg F (deg 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 50% clean and dry regrind may be used for the '16 series' flame retardant grades.
	Injection molding Preprocessing

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