Celanese
The chemistry inside innovation™

CELANEX® DEV 3416 - PBT

Description

Celanex 3416 is a non-exuding flame retarded, 45% fiberglass reinforced polybutylene terephthalate which has an excellent balance of mechanical properties and processability. It is well suited for electrical connector applications
Development Grade, Restricted Data Sheet

Physical properties	Value	Unit	Test Standard
Melt volume rate, MVR	**8**	cm^3/10min	ISO 1133
MVR temperature	**482**	°F	ISO 1133
MVR load	**4.76**	lb	ISO 1133

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	**2.41E6**	psi	ISO 527-1, -2
Tensile stress at break, 5mm/min	**23900**	psi	ISO 527-1, -2
Tensile strain at break, 5mm/min	**1.6**	%	ISO 527-1, -2

Thermal properties	Value	Unit	Test Standard
Flammability at thickness h	**V-0**	class	UL 94
thickness tested (h)	**0.0157**	in	UL 94

Other text information

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

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 <-30 °F (-34 °C) at 250 °F (121 °C) for 4 hours..

Characteristics

Special Characteristics	Flame retardant, Heat resistant
Product Categories	Glass reinforced

CELANEX® DEV 3416 - PBT *(EXPERIMENTAL)*

Processing	Injection molding
Delivery Form	Pellets
Additives	Release agent, Flame retarding agent