

## 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 <sup>3</sup> /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*)

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<b>Processing</b>	Injection molding
<b>Delivery Form</b>	Pellets
<b>Additives</b>	Release agent, Flame retarding agent