

Celanex 3300 is a general purpose, 30% glass reinforced, polybutylene terephthalate that offers a superior combination of mechanical, electrical, and thermal properties. This grade provides outstanding processability and good chemical resistance. Celanex 3300 is a high flow material.

Physical properties	Value	Unit	Test Standard
Melt flow rate (MFR)	16	g/10 min	ASTM D1238
Specific gravity	1.53	-	ASTM D792
Mold shrinkage - flow direction	0.003-0.005	mm/mm	ASTM D955

Mechanical properties	Value	Unit	Test Standard
Elongation @ break (176°F)	3.9	%	ASTM D638
Elongation @ break (250°F)	4.3	%	ASTM D638
Elongation @ break (32°F)	1.9	%	ASTM D638
Elongation @ break (-40°F)	1.9	%	ASTM D638
Elongation @ break (73°F)	2	%	ASTM D638
Tensile modulus (-40°F)	1.60E6	psi	ASTM D638
Tensile modulus (32°F)	1.52E6	psi	ASTM D638
Tensile modulus (73°F)	1.40E6	psi	ASTM D638
Tensile modulus (176°F)	7E5	psi	ASTM D638
Tensile modulus (250°F)	5.45E5	psi	ASTM D638
Tensile strength @ break (-40°F)	27500	psi	ASTM D638
Tensile strength @ break (32°F)	23000	psi	ASTM D638
Tensile strength @ break (73°F)	19500	psi	ASTM D638
Tensile strength @ break (176°F)	11300	psi	ASTM D638
Tensile strength @ break (250°F)	8900	psi	ASTM D638

Thermal properties	Value	Unit	Test Standard
Melting point	225	°C	ASTM D3418
Heat deflection temperature @264 psi	206	°C	ASTM D648
Heat deflection temperature @66 psi	228	°C	ASTM D648

Electrical properties	Value	Unit	Test Standard
Dielectric constant - 1MHz	3.7	-	ASTM D150
Dissipation factor - 1MHz	0.016	-	ASTM D150
Volume resistivity	1E15	ohm-cm	ASTM D257
Dielectric strength - short term	560	v/mil	ASTM D149
Comparative tracking index	500	volts	ASTM D3638
Arc resistance	125	s	ASTM D495

UL properties	Value	Unit	Test Standard
UL94 flame class	HB	-	UL94

Injection Molding

Rear Temperature 450-470(230-240) deg F (deg C) Center Temperature 460-480(235-250) deg F (deg C) Front Temperature 470-500(240-260) deg F (deg C) Nozzle Temperature 480-500(250-260) deg F (deg C) Melt Temperature 460-500(235-260) 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 25% clean and dry regrind may be used.

Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed (+49 (0) 69 30516299 for Europe and +1 859-372-3244 for the Americas) for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products. The products mentioned herein are not intended for use in medical or dental implants.