Celanex® 3300-2

Polybutylene Terephthalate

Celanese Corporation

PROSPECTOR®

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Technical Data

Product Description

Celanex 3300-2 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 3300-2 is a high flow material that contains an internal lubricant.

General

Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet - ASTM (English) • Technical Datasheet - ISO (English)		
UL Yellow Card [2]	• E42337-234674		
Search for UL Yellow Card	• Celanese Corporation • Celanex®		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Additive	• Lubricant		
Features	• Chemical Resistant • General Purpose	• Good Processability • High Flow	• Lubricated
Uses	• General Purpose		
RoHS Compliance	• Contact Manufacturer		
Automotive Specifications	• CHRYSLER MS-DB-400 CPN2252 Color: Natural • CHRYSLER MS-DB-400 CPN2512 Color: Black • FORD ESB-M4D354-A1 Color: Black • FORD WSS-M4D725-B1	• FORD WSS-M4D929-A3 • GM GMP.PBT.010 Color: Black • GM GMP.PBT.010 Color: Natural • GM GMP.PBT.036 Color: Colored	• GM GMW16733P-PBT-GF30 • GM QK 006615 Color: Natural

Physical	Nominal Value Unit	Test Method
Density / Specific Gravity	1.53 g/cm³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR)	16 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	17.0 cm³/10min	ISO 1133
Molding Shrinkage		
Flow	0.30 to 0.50 %	ASTM D955
Across Flow	0.70 to 1.1 %	ISO 294-4
Flow	0.30 to 0.70 %	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.20 %	ISO 62

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus		
-40°C	11000 MPa	ASTM D638
0°C	10500 MPa	ASTM D638
23°C	9650 MPa	ASTM D638
80°C	4830 MPa	ASTM D638
121°C	3760 MPa	ASTM D638
--	9200 MPa	ISO 527-2/1A/1
Tensile Strength		
Break, -40°C	190 MPa	ASTM D638
Break, 0°C	159 MPa	ASTM D638
Break, 23°C	134 MPa	ASTM D638
Break, 80°C	77.2 MPa	ASTM D638
Break, 121°C	61.4 MPa	ASTM D638
Break	130 MPa	ISO 527-2/1A/5

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Mechanical	Nominal Value	Unit	Test Method
Tensile Elongation			
Break, -40°C	1.9	%	ASTM D638
Break, 0°C	1.9	%	ASTM D638
Break, 23°C	2.0	%	ASTM D638
Break, 80°C	3.9	%	ASTM D638
Break, 121°C	4.3	%	ASTM D638
Break	2.5	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	9700	MPa	ISO 178
Flexural Stress (23°C)	210	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	8.5	kJ/m²	
23°C	8.5	kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	45	kJ/m²	
23°C	46	kJ/m²	
Notched Izod Impact Strength (23°C)	7.5	kJ/m²	ISO 180/1A
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	90		ISO 2039-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Unannealed	228	°C	ASTM D648
0.45 MPa, Unannealed	225	°C	ISO 75-2/B
1.8 MPa, Unannealed	206	°C	ASTM D648
1.8 MPa, Unannealed	205	°C	ISO 75-2/A
8.0 MPa, Unannealed	150	°C	ISO 75-2/C
Glass Transition Temperature [4]	60.0	°C	ISO 11357-2
Vicat Softening Temperature	220	°C	ISO 306/B50
Melting Temperature [4]	225	°C	ISO 11357-3 ASTM D3418
CLTE			ISO 11359-2
Flow	2.5E-5	cm/cm/°C	
Transverse	1.0E-4	cm/cm/°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity			
--	1.0E+15	ohms·cm	ASTM D257
--	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength			
-- [5]	22	kV/mm	ASTM D149
--	31	kV/mm	IEC 60243-1
Dielectric Constant			
1 MHz	3.70		ASTM D150
100 Hz	4.50		IEC 60250
1 MHz	4.10		IEC 60250
Dissipation Factor			
1 MHz	2.0E-3		ASTM D150
100 Hz	2.2E-3		IEC 60250
1 MHz	0.016		IEC 60250
Comparative Tracking Index	425	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.71 mm)	HB		UL 94
Oxygen Index	20	%	ISO 4589-2

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Injection	Nominal Value	Unit
Drying Temperature	120 to 130	°C
Drying Time	4.0	hr
Suggested Max Moisture	0.020	%
Suggested Max Regrind	25	%
Hopper Temperature	20 to 50	°C
Rear Temperature	230 to 240	°C
Middle Temperature	235 to 250	°C
Front Temperature	235 to 250	°C
Nozzle Temperature	250 to 260	°C
Processing (Melt) Temp	235 to 260	°C
Mold Temperature	65 to 93	°C
Injection Rate	Fast	
Back Pressure	0.00 to 0.345	MPa

Injection Notes

Manifold Temperature: 250 to 260°C
Zone 4 Temperature: 240 to 260°C
Feed Temperature: 230 to 240°C

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Typical properties: these are not to be construed as specifications.

[4] 10°C/min

[5] Method A (Short-Time)

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Where to Buy

Supplier

Celanese Corporation
Florence, KY USA
Telephone: 800-833-4882
Web: http://www.celanese.com/engineered-materials

Distributor

Amco Polymers
Telephone: 800-262-6685
Web: http://www.amcopolymers.com/
Availability: North America

Channel Prime Alliance
Telephone: 800-247-8038
Web: http://www.channelpa.com/
Availability: North America

Entec Polymers
Telephone: 800-375-5440
Web: http://www.entecpolymers.com/
Availability: North America

ESSE International - OMYA
ESSE International - OMYA is a Pan European distribution company. Contact ESSE International - OMYA for availability of individual products by country.
Telephone: +33-1-30-80-56-56
Web: http://www.omya.com
Availability: Spain, Switzerland

RESINEX Group
RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.
Telephone: +32-14-672511
Web: http://www.resinex.com/
Availability: Europe

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