



Celanex® 3201

Celanese Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

Celanex 3201 is a 15% glass reinforced general purpose thermoplastic polyester resin that offers a superior combination of mechanical, electrical, and thermal properties, together with outstanding processability, good chemical resistance, and toughness.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight		
Features	• Chemical Resistant • Good Electrical Properties	• Good Processability • Good Toughness	
RoHS Compliance	• Contact Manufacturer		
Automotive Specifications	• ASTM D5927 TPES011 G15 Color: Black • ASTM D5927 TPES011 G15 Color: Natural	• VALEO VMS-4147 Color: Black • VALEO VMS-4147 Color: Natural	

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density	1.42	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	17	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Water Absorption (Saturation, 73°F)	0.50	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	870000	psi	ISO 527-2/1A
Tensile Stress (Break)	14500	psi	ISO 527-2/1A/5
Tensile Strain (Break)	3.5	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	812000	psi	ISO 178
Flexural Stress (73°F)	23200	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	3.1	ft-lb/in ²	ISO 179/1eA
Notched Izod Impact Strength			ISO 180/1A
-22°F	3.3	ft-lb/in ²	
73°F	3.3	ft-lb/in ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	424	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	383	°F	ISO 75-2/A
Glass Transition Temperature ²	140	°F	ISO 11357-2
Vicat Softening Temperature	428	°F	ISO 306/B50
Melting Temperature ²	437	°F	ISO 11357-3
CLTE - Flow	1.9E-5	in/in/°F	ISO 11359-2
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.03 in)	HB		UL 94

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248 to 266	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.020	%
Suggested Max Regrind	25	%
Hopper Temperature	68 to 122	°F
Rear Temperature	446 to 464	°F
Middle Temperature	455 to 482	°F
Front Temperature	455 to 482	°F
Nozzle Temperature	482 to 500	°F
Processing (Melt) Temp	455 to 500	°F
Mold Temperature	149 to 199	°F
Injection Rate	Moderate-Fast	
Back Pressure	0.00 to 50.0	psi

Injection Notes

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

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min