Celanese
The chemistry inside innovation™

CELANEX® 2300 GV1/20T ED3002 BLACK

CELANEX® PBT

General purpose, 20% glass fiber reinforced PBT grade, black color, lubricated and stabilized. Good mechanical strength and toughness.

Product information

Resin Identification	PBT-GF20	ISO 1043
Part Marking Code	>PBT-GF20<	ISO 11469

Rheological properties

Melt volume-flow rate	12	cm^3/10min	ISO 1133
Temperature	250	°C	
Load	2.16	kg	

Typical mechanical properties

Tensile modulus	7400	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	120	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3.5	%	ISO 527-1/-2
Flexural modulus	7000	MPa	ISO 178
Flexural strength	190	MPa	ISO 178
Charpy notched impact strength, 23°C	9.3	kJ/m^2	ISO 179/1eA
Izod notched impact strength, 23°C	9.5	kJ/m^2	ISO 180/1A
Poisson's ratio	0.35[C]		

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	206	°C	ISO 75-1/-2

Physical/Other properties

Density	1450	kg/m^3	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	120	°C
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	250	°C
Min. melt temperature	240	°C
Max. melt temperature	260	°C
Screw tangential speed	0.1 - 0.3	m/s
Mold Temperature Optimum	80	°C
Min. mould temperature	60	°C
Max. mould temperature	130	°C

Celanese
The chemistry inside innovation™

CELANEX® 2300 GV1/20T ED3002 BLACK

CELANEX® PBT

Characteristics

Processing	Injection Moulding
Delivery form	Pellets

Additional information

Injection molding

Processing

Melt Temperature 260-270 °C
Mold Temperature *) 75-85 °C
Maximum Barrel Residence Time **) 5-10 min
Injection Speed fast
Peripheral screw speed max.0,3 m/sec
Back Pressure 10-30 bar
Injection Pressure 600-1000 bar
Holding Pressure 400-800 bar
Nozzle Design open design preferred

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. For grades containing flame retardants, a maximum temperature of 265 °C should not be exceeded.

Celanese recommends only externally heated hot runner systems.

*) For moulded parts with especially high requirements to the surface quality or dimensional stability, a mold temperature of up to 110 °C can be advantageous.

**) If the cylinder temperatures are higher than the recommended maximum temperatures, the max. residence time in the barrel has to be reduced.

Processing Notes

Pre-Drying

CELANEX should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be =< - 30° C. The time between drying and processing should be as short as possible.

Storage

For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to 100° C.

Celanese
The chemistry inside innovation™

CELANEX® 2300 GV1/20T ED3002 BLACK

CELANEX® PBT

Revised: 2025-05-16 Source: Celanese Materials Database