Celanese
The chemistry inside innovation™

CELANEX® 5206HG

CELANEX® PBT

Celanex 5206HG is a 15% glass-filled polyester featuring super high surface gloss and high flow for long flow channels. A typical application is oven handles.

Product information

Resin Identification	(PBT+PET)-GF15		ISO 1043
Part Marking Code	>(PBT+PET)-GF15<		ISO 11469

Rheological properties

Molding shrinkage range, parallel	0.4 - 0.6	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	928000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	13800	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.8	%	ISO 527-1/-2
Flexural modulus	914000	psi	ISO 178
Flexural strength	19600	psi	ISO 178
Charpy notched impact strength, 23°C	2.24	ftlb/in²	ISO 179/1eA
Izod notched impact strength, 23°C	2.14	ftlb/in²	ISO 180/1A

Thermal properties

Melting temperature, 10°C/min	482	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	356	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	428	°F	ISO 75-1/-2

Flammability

Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.0315	in	IEC 60695-11-10

Physical/Other properties

Density	0.0523	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	275	°F
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	≤0.01	%
Melt Temperature Optimum	554	°F
Min. melt temperature	518	°F
Max. melt temperature	572	°F
Max. screw tangential speed	0.1 - 0.3	m/s
Mold Temperature Optimum	266	°F
Min. mold temperature	248	°F
Max. mold temperature	284	°F

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

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Characteristics

Processing	Injection Molding
Special characteristics	High Gloss, Specialty appearance

Additional information

Injection molding

Processing

Rear Temperature 480-500 (250-260) deg F (deg C)
Center Temperature 490-510 (255-265) deg F (deg C)
Front Temperature 500-540 (260-270) deg F (deg C)
Nozzle Temperature 510-520 (265-275) deg F (deg C)
Melt Temperature 520-570 (270-300) deg F (deg C)
Mold Temperature 250-275 (120-135) deg F (deg C)
Back Pressure 0-25 psi
Screw Speed 50-75 rpm
Injection Speed Medium/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. Up to 25% clean and dry regrind may be used.

Processing Notes

Pre-Drying

To avoid hydrolytic degradation during processing, Impet resins have to be dried to a moisture level equal to or less than 0.01%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°F (-40°C) at 275°F (135°C) for 4 hours.

Storage

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

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