Celanese
The chemistry inside innovation™

CELANEX® 4022

CELANEX® PBT

Celanex 4022 is a white PBT resin typically used for applications requiring very opaque parts.

Product information

Resin Identification	PBT-MD16	ISO 1043
Part Marking Code	>PBT-MD16<	ISO 11469

Rheological properties

Melt mass-flow rate	19	g/10min	ISO 1133
Melt mass-flow rate, Temperature	482	°F	
Melt mass-flow rate, Load	4.76	lb	
Molding shrinkage range, parallel	1.8 - 2	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	464000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	8410	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	8	%	ISO 527-1/-2
Flexural strength	12500	psi	ISO 178
Charpy impact strength, 23°C	15.7	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	1.66	ftlb/in²	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	433	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	145	°F	ISO 75-1/-2

Flammability

Thickness tested	0.0311	in	IEC 60695-11-10

Electrical properties

Comparative tracking index	400		IEC 60112

Physical/Other properties

Density	0.0527	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	248	°F
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	482	°F
Min. melt temperature	464	°F
Max. melt temperature	500	°F
Max. screw tangential speed	0.1 - 0.3	m/s
Mold Temperature Optimum	176	°F
Min. mold temperature	140	°F
Max. mold temperature	266	°F

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

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Automotive

OEM	STANDARD
Continental	SN 57908-4

Characteristics

Processing	Injection Molding
Additives	Release agent
Special characteristics	Specialty appearance

Additional information

Injection molding

Preprocessing

To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-30°F (-34°C) at 250°F (121°C) for 4 hours.

Processing

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.

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