CELANEX® 5200-2

CELANEX® PBT

Celanex 5200-2 is a 15% fiberglass reinforced polyester with improved surface finish. Celanex 5200-2 contains an internal lubricant.

Product information

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

Rheological properties

Melt volume-flow rate	38	cm^3/10min	ISO 1133
Temperature	509	°F	
Load	4.76	lb	
Melt mass-flow rate	28	g/10min	ISO 1133
Melt mass-flow rate, Temperature	509	°F	
Melt mass-flow rate, Load	4.76	lb	
Viscosity number	1910	in^3/lb	ISO 307, 1628
Molding shrinkage range, parallel	0.4 - 0.6	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	870000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	17400	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	3	%	ISO 527-1/-2
Flexural modulus	1.16E6	psi	ISO 178
Flexural strength	26800	psi	ISO 178
Charpy impact strength, 23°C	16.6	ftlb/in^2	ISO 179/1eU
Charpy impact strength, -30°C	16.6	ftlb/in^2	ISO 179/1eU
Charpy notched impact strength, 23°C	3.81	ftlb/in^2	ISO 179/1eA
Charpy notched impact strength, -30°C	3.81	ftlb/in^2	ISO 179/1eA
Izod notched impact strength, 23°C	3.38	ftlb/in^2	ISO 180/1A
Hardness, Rockwell, M-scale	91		ISO 2039-2

Tribological properties

Coefficient of dynamic friction, against steel	0.16	ISO 8295
Coefficient of dynamic friction, against brass	0.18	

Thermal properties

Melting temperature, 10°C/min	500	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	374	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	419	°F	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	149	°F	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	410	°F	ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	0.19	E-4/°F	ISO 11359-1/-2

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Flammability

Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.0295	in	IEC 60695-11-10
Oxygen index	20	%	ISO 4589-1/-2

Electrical properties

Relative permittivity, 100Hz	4.3		IEC 62631-2-1
Relative permittivity, 1MHz	4		IEC 62631-2-1
Dissipation factor, 100Hz	11	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	190	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	711	kV/in	IEC 60243-1
Comparative tracking index	325		IEC 60112

Physical/Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Water absorption, 2mm	0.45	%	Sim. to ISO 62
Water absorption, Immersion 24h	0.05	%	Sim. to ISO 62
Density	0.0509	lb/in^3	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	248	°F
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	509	°F
Min. melt temperature	491	°F
Max. melt temperature	527	°F
Max. screw tangential speed	0.1 - 0.3	m/s
Mold Temperature Optimum	212	°F
Min. mold temperature	194	°F
Max. mold temperature	266	°F

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
Stellantis - Chrysler	MS.50103 / CPN-2425	Black

Characteristics

Processing	Injection Molding
Special characteristics	High Gloss

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Additional information

Processing Notes

Pre-Drying

To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°F (-40°C) at 250°F (121°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.

Revised: 2025-06-25 Source: Celanese Materials Database

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