

DuPont™ Thermx® PCT

high performance polyester resin

Thermx® CG923 BK010

Thermx® CG923 BK010 is a 20% glass fiber reinforced, flame retardant, black polycyclohexylenedimethylene terephthalate resin for injection molding.

Property	Test Method	Units	Value
Identification			
Resin Identification	ISO 1043		PCT-GF20FR(17)
Part Marking Code	ISO 11469		>PCT-GF20FR(17)<
Mechanical			
Stress at Break	ISO 527	MPa (kpsi)	100 (14.5)
Strain at Break	ISO 527	%	1.8
Tensile Modulus	ISO 527	MPa (kpsi)	8000 (1160)
Flexural Modulus	ISO 178	MPa (kpsi)	7400 (1070)
Flexural Strength	ISO 178	MPa (kpsi)	145 (21.0)
Notched Izod Impact Strength	ISO 180/1A	kJ/m ²	5
Izod Impact	ASTM D 256	J/m (ft lb/in)	45 (0.8)
Unnotched Impact	ASTM D 4812	J/m (ft lb/in)	430 (8.1)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m ²	5
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m ²	30
Thermal			
Deflection Temperature 1.80MPa	ISO 75	°C (°F)	225 (437)
Melting Temperature 10°C/min	ISO 11357-1/-3	°C (°F)	283 (541)

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.
 ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.
 Test temperatures are 23°C unless otherwise stated.

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Property	Test Method	Units	Value
Electrical			
Surface Resistivity	ASTM D 257	ohm	1E16
Volume Resistivity	ASTM D 257	ohm cm	1E15
Dielectric Strength, Short Time 500 V/s, 3.2mm	ASTM D 149	kV/mm (V/mil)	20.7 (526)
Dielectric Constant	ASTM D 150		
1E3 Hz			3.0
1E4 Hz			3.0
1E5 Hz			3.0
1E6 Hz			3.0
Dissipation Factor	ASTM D 150		
1E3 Hz			0.013
1E4 Hz			0.021
1E5 Hz			0.003
1E6 Hz			0.008
Flammability			
Flammability Classification 1.5mm	IEC 60695-11-10		V-0
Flammability Classification 1.5mm	UL94		V-0
Temperature Index			
RTI, Electrical 1.5mm	UL 746B	°C	150
RTI, Strength 1.5mm	UL 746B	°C	130
Other			
Density	ISO 1183	kg/m ³ (g/cm ³)	1580 (1.58)
Hardness, Rockwell Scale M	ASTM D 785		84

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Property	Test Method	Units	Value
Processing			
Melt Temperature Range		°C (°F)	295-310 (565-590)
Melt Temperature Optimum		°C (°F)	300 (570)
Mold Temperature Range		°C (°F)	80-120 (175-250)
Mold Temperature Optimum		°C (°F)	100 (210)
Drying Time, Dehumidified Dryer		h	4-6
Drying Temperature		°C (°F)	95 (200)
Processing Moisture Content		%	<0.03

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