

# DuPont™ Thermx® PCT

high performance polyester resin

## Thermx® CG033 NC010

Thermx® CG033 NC010 is a 30% glass fiber reinforced polycyclohexylenedimethylene terephthalate resin for injection molding.

Property	Test Method	Units	Value
<b>Identification</b>			
Resin Identification	ISO 1043		PCT-GF30
Part Marking Code	ISO 11469		>PCT-GF30<
<b>Mechanical</b>			
Stress at Break	ISO 527	MPa (kpsi)	125 (18.1)
Strain at Break	ISO 527	%	2
Tensile Modulus	ISO 527	MPa (kpsi)	8900 (1290)
Flexural Modulus	ISO 178	MPa (kpsi)	8000 (1160)
Flexural Strength	ISO 178	MPa (kpsi)	188 (27.3)
Notched Izod Impact Strength	ISO 180/1A	kJ/m <sup>2</sup>	8
Izod Impact	ASTM D 256	J/m (ft lb/in)	75 (1.4)
Unnotched Impact	ASTM D 4812	J/m (ft lb/in)	730 (13.7)
Notched Charpy Impact Strength	ISO 179/1eA	kJ/m <sup>2</sup>	8
Unnotched Charpy Impact Strength	ISO 179/1eU	kJ/m <sup>2</sup>	50
<b>Thermal</b>			
Deflection Temperature 1.80MPa	ISO 75	°C (°F)	262 (504)
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
<b>Electrical</b>			
Surface Resistivity	ASTM D 257	ohm	1E15
Volume Resistivity	ASTM D 257	ohm cm	1E16
Dielectric Strength, Short Time 500 V/s, 3.2mm	ASTM D 149	kV/mm (V/mil)	16.1 (409)
Dielectric Constant	ASTM D 150		
1E3 Hz			3.3
1E4 Hz			3.2
1E5 Hz			3.2
1E6 Hz			3.2
Dissipation Factor	ASTM D 150		
1E3 Hz			0.018
1E4 Hz			0.007
1E5 Hz			0.010
1E6 Hz			0.010
CTI	IEC 60112	V	560
<b>Flammability</b>			
Flammability Classification 0.8mm	IEC 60695-11-10		HB
Flammability Classification 0.8mm	UL94		HB
<b>Other</b>			
Density	ISO 1183	kg/m <sup>3</sup> (g/cm <sup>3</sup> )	1450 (1.45)
Hardness, Rockwell Scale M	ASTM D 785		70
Molding Shrinkage	ISO 294-4	%	
Normal, 2.0mm			0.9
Parallel, 2.0mm			0.25

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## Thermx® CG033 NC010

Property	Test Method	Units	Value
<b>Processing</b>			
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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