

Thermx® CG023

Polycyclohexylenedimethylene Terephthalate
Celanese Corporation

Message:

Thermx® CG023 is a 20% glass fiber reinforced polycyclohexylenedimethylene terephthalate for injection molding.

General Information			
Filler / Reinforcement	Glass Fiber,20% Filler by Weight		
Features	General Purpose		
Uses	General Purpose		
RoHS Compliance	Contact Manufacturer		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.38	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/2.16 kg)	30.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.80	%	
Flow	0.30	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	6400	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	100	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.3	%	ISO 527-2/1A/5
Tensile Creep Modulus			ISO 899-1
1 hr	6000	MPa	
1000 hr	4600	MPa	
Flexural Modulus (23°C)	5800	MPa	ISO 178
Flexural Stress (23°C)	155	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	7.0	kJ/m ²	
23°C	7.0	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	30	kJ/m ²	
23°C	35	kJ/m ²	
Notched Izod Impact Strength (23°C)	6.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	253	°C	ISO 75-2/A
Glass Transition Temperature ¹	105	°C	ISO 11357-2
Melting Temperature ²	285	°C	ISO 11357-3

CLTE			ISO 11359-2
Flow	3.0E-5	cm/cm/°C	
Transverse	8.0E-5	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Electric Strength	41	kV/mm	IEC 60243-1
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	HB		UL 94
Fill Analysis	Nominal Value	Unit	Test Method
Density of Melt	1.140	g/cm ³	Internal Method
Ejection Temperature	230	°C	Internal Method
Specific Heat Capacity of Melt	1470	J/kg/°C	Internal Method
Thermal Conductivity of Melt	0.20	W/m/K	Internal Method
Injection	Nominal Value	Unit	
Drying Temperature	95.0	°C	
Drying Time	4.0 to 6.0	hr	
Processing (Melt) Temp	295 to 310	°C	
Mold Temperature	80.0 to 120	°C	
NOTE			
1.	10°C/min		
2.	10°C/min		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

