Celcon® GC25T

Celanese Corporation - Acetal (POM) Copolymer

Saturday, November 2, 2019

General Information

Product Description

Celcon® GC25T is a 25% glass fiber coupled acetal copolymer grade. It offers higher strength than the standard Celcon GC25-A. Celcon GC25T is FDA approved. Celcon GC25T is also exceptionally resistant to fuel. It offers excellent resistance to transportation fuels especially oxygenated fuels. Chemical abbreviation according to ISO 1043-1: POM

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 25% Filler by Weight		
Features	• Chemically Coupled	• Fuel Resistant	• Good Strength
Agency Ratings	• FDA Unspecified Rating		
RoHS Compliance	• Contact Manufacturer		
Resin ID (ISO 1043)	• POM		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.57	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.80	%	
Flow	0.40	%	
Water Absorption (Saturation, 73°F)	0.80	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1.25E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	18700	psi	ISO 527-2/1A/5
Tensile Strain (Break)	3.0	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.24E+6	psi	ISO 178
Flexural Stress (73°F)	29300	psi	ISO 178
Compressive Stress (1% Strain)	9720	psi	ISO 604
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	3.4	ft·lb/in²	
73°F	4.1	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	26	ft·lb/in²	
73°F	24	ft·lb/in²	
Notched Izod Impact Strength (73°F)	3.8	ft·lb/in²	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (264 psi, Unannealed)	322	°F	ISO 75-2/A
Vicat Softening Temperature	322	°F	ISO 306/B50
Melting Temperature [2]	329	°F	ISO 11357-3
Melting Temperature	329	°F	
CLTE - Flow	1.5E-5	in/in/°F	ISO 11359-2

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Thermal	Nominal Value	Unit	Test Method
CLTE - Transverse	6.9E-5	in/in/°F	ISO 11359-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212 to 248	°F
Drying Time	3.0 to 4.0	hr
Rear Temperature	338 to 356	°F
Middle Temperature	356 to 374	°F
Front Temperature	356 to 374	°F
Nozzle Temperature	374 to 392	°F
Processing (Melt) Temp	356 to 392	°F
Mold Temperature	194 to 248	°F
Injection Rate	Slow	
Back Pressure	< 290	psi

Injection Notes

Zone4 temperature: 190 to 200°C

Hot runner temperature: 190 to 210°C

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 10°C/min