Celcon® GC25A

Celanese Corporation - Acetal (POM) Copolymer

Saturday, November 2, 2019

General Information

Product Description

Celcon® acetal copolymer grade GC25A is a glass coupled formulation containing 25% reinforced fiber glass. This grade offers excellent strength, stiffness and heat distortion temperature with lower mold shrinkage, minimum thermal expansion, excellent dimensional stability and good moldability. 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 • Good Dimensional Stability • Good Moldability	• Good Stiffness • Good Strength • Low CLTE	• Low Shrinkage
RoHS Compliance	• Contact Manufacturer		
Resin ID (ISO 1043)	• POM		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.58	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	1.2	%	
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)	15400	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.0	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.26E+6	psi	ISO 178
Flexural Stress			ISO 178
--	22500	psi	
73°F	23200	psi	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	3.0	ft·lb/in²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	17	ft·lb/in²	
73°F	12	ft·lb/in²	
Notched Izod Impact Strength (73°F)	2.9	ft·lb/in²	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (264 psi, Unannealed)	320	°F	ISO 75-2/A
Vicat Softening Temperature	322	°F	ISO 306/B50
Melting Temperature [2]	329	°F	ISO 11357-3
Melting Temperature	331	°F	
CLTE - Flow	1.4E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	6.7E-5	in/in/°F	ISO 11359-2

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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: 180 to 200°C
Flow temperature: 182°C

Notes

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

[2] 10°C/min