

Celcon® GC25A

Acetal (POM) Copolymer

Celanese Corporation

PROSPECTOR®

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Technical Data

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
Literature ¹	• Technical Datasheet (English) • Technical Datasheet (English)
UL Yellow Card ²	• E38860-239297
Search for UL Yellow Card	• Celanese Corporation • Celcon®
Availability	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 25% Filler by Weight
Features	• Chemically Coupled • Good Moldability • High Stiffness • Good Dimensional Stability • Good Strength • Low Shrinkage
RoHS Compliance	• Contact Manufacturer
Multi-Point Data	• Isochronous Stress vs. Strain (ISO 11403-1) • Isothermal Stress vs. Strain (ISO 11403-1)
Resin ID (ISO 1043)	• POM

Physical	Nominal Value Unit	Test Method
Specific Gravity	1.58 g/cm ³	ASTM D792 ISO 1183
Molding Shrinkage		
Flow	0.40 %	ASTM D955 ISO 294-4
Across Flow	1.4 %	ASTM D955
Across Flow	1.2 %	ISO 294-4
Water Absorption		ISO 62
Saturation, 23°C	0.80 %	
Equilibrium, 23°C, 50% RH	0.20 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	8600 MPa	ISO 527-2/1A/1
Tensile Strength		
Break, -40°C	159 MPa	ASTM D638
Break, 23°C	110 MPa	ASTM D638
Break, 71°C	68.9 MPa	ASTM D638
Break	106 MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.0 %	ISO 527-2/1A/5
Flexural Modulus (23°C)	8700 MPa	ISO 178
Flexural Stress (23°C)	160 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.4 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength		ISO 179/1eU
-30°C	35 kJ/m ²	
23°C	25 kJ/m ²	
Notched Izod Impact Strength (23°C)	6.0 kJ/m ²	ISO 180/1A



Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		
1.8 MPa, Unannealed	163 °C	ASTM D648
1.8 MPa, Unannealed	160 °C	ISO 75-2/A
Melting Temperature		
-- ⁴	165 °C	ISO 11357-3
--	166 °C	ASTM D3418
CLTE		ISO 11359-2
Flow	2.5E-5 cm/cm/°C	
Transverse	1.2E-4 cm/cm/°C	

Electrical	Nominal Value Unit	Test Method
Volume Resistivity	1.4E+14 ohms·cm	ASTM D257

Injection	Nominal Value Unit
Drying Temperature	80.0 to 100 °C
Drying Time	3.0 hr
Rear Temperature	170 to 180 °C
Middle Temperature	180 to 190 °C
Front Temperature	180 to 190 °C
Nozzle Temperature	190 to 200 °C
Processing (Melt) Temp	180 to 200 °C
Mold Temperature	90.0 to 120 °C
Injection Pressure	90.0 to 140 MPa
Injection Rate	Slow
Holding Pressure	90.0 to 140 MPa
Back Pressure	0.00 to 2.00 MPa

Injection Notes
Manifold Temperature: 180 to 200°C
Zone 4 Temperature: 190 to 200°C

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ 10°C/min



Where to Buy

Supplier

Celanese Corporation
Florence, KY USA
Telephone: 800-833-4882
Web: <http://www.celanese.com/engineered-materials>

Distributor

Amco Polymers
Telephone: 800-262-6685
Web: <http://www.amcopolymers.com/>
Availability: North America

Channel Prime Alliance
Telephone: 800-247-8038
Web: <http://www.channelpa.com/>
Availability: North America

Entec Polymers
Telephone: 800-375-5440
Web: <http://www.entecpolymers.com/>
Availability: North America

