

Technical Data

Product Description

Celcon® acetal copolymer grade M270™ is a lower molecular weight, high - flow grade designed for superior moldability in multi-cavity, intricate or hard to fill molds applications. Chemical abbreviation according to ISO 1043-1: POM Please also see Hostaform® C 27021.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet (English)
UL Yellow Card ²	• E38860-239310
Search for UL Yellow Card	• Celanese Corporation • Celcon®
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Features	• Good Moldability • High Flow • Low Molecular Weight
RoHS Compliance	• Contact Manufacturer
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403-1)
Resin ID (ISO 1043)	• POM

Physical	Nominal Value Unit	Test Method
Density	1.41 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	23 cm ³ /10min	ISO 1133
Molding Shrinkage		ISO 294-4
Across Flow	1.6 %	
Flow	1.7 %	
Water Absorption		ISO 62
Saturation, 23°C	0.75 %	
Equilibrium, 23°C, 50% RH	0.20 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	2800 MPa	ISO 527-2/1A
Tensile Stress (Yield)	67.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	8.0 %	ISO 527-2/1A/50
Tensile Creep Modulus		ISO 899-1
1 hr	2300 MPa	
1000 hr	1300 MPa	
Flexural Modulus (23°C)	2750 MPa	ISO 178
Flexural Stress (3.5% Strain)	76.0 MPa	ISO 178
Compressive Stress		ISO 604
1% Strain	26.0 MPa	
6% Strain	90.0 MPa	

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.2 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength		ISO 179/1eU
-30°C	110 kJ/m ²	
23°C	120 kJ/m ²	
Notched Izod Impact Strength		ISO 180/1A
-30°C	5.0 kJ/m ²	
23°C	5.4 kJ/m ²	



Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed	156 °C	ISO 75-2/B
1.8 MPa, Unannealed	103 °C	ISO 75-2/A
Vicat Softening Temperature	161 °C	ISO 306/B50
Melting Temperature		
--	165 °C	
-- ⁴	166 °C	ISO 11357-3
CLTE		ISO 11359-2
Flow	1.1E-4 cm/cm/°C	
Transverse	1.2E-4 cm/cm/°C	

Fill Analysis	Nominal Value Unit	Test Method
Melt Density	1.20 g/cm ³	Internal Method
Melt Thermal Conductivity	0.16 W/m/K	Internal Method
Ejection Temperature	140 °C	
Specific Heat Capacity of Melt	2210 J/kg/°C	

Injection	Nominal Value Unit
Drying Temperature	100 to 120 °C
Drying Time	3.0 to 4.0 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	80 to 120 °C
Injection Rate	Slow-Moderate
Back Pressure	< 4.00 MPa

Injection Notes

Zone4 temperature: 190 to 200°C
Hot runner temperature: 180 to 200°C
No flow temperature: 160°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

RESINEX Group
RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.
Telephone: +32-14-672511
Web: <http://www.resinex.com/>
Availability: Europe

