Celanese
The chemistry inside innovation™

CELCON® M270 ECO-B

CELCON®

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.
ECO-B: Celcon® ECO-B is a POM-Copolymer with the same properties and performance as standard grades but produced with sustainability in mind. Using a mass-balance approach, biogenic feedstocks are used to offset the use of fossil-based raw materials and decrease greenhouse gas emissions. The process is audited and certified according to the ISCC Plus mass balance approach.

产品信息

树脂鉴别	POM		ISO 1043
制品标识码	>POM<		ISO 11469

流变性能

熔体体积流动速度	23	cm^3/10min	ISO 1133
温度	190	°C	
负荷	2.16	kg	
模塑收缩率, 平行	1.7	%	ISO 294-4, 2577
模塑收缩率, 垂直	1.6	%	ISO 294-4, 2577

机械性能

拉伸模量	2800	MPa	ISO 527-1/-2
拉伸屈服应力, 50mm/min	67	MPa	ISO 527-1/-2
屈服伸长率, 50mm/min	8	%	ISO 527-1/-2
弯曲模量	2750	MPa	ISO 178
3.5%应变时的弯曲应力	76	MPa	ISO 178
1%形变时的压缩应力	31	MPa	ISO 604
拉伸蠕变模量, 1h	2300	MPa	ISO 899-1
拉伸蠕变模量, 1000h	1300	MPa	ISO 899-1
简支梁无缺口冲击强度, 23°C	116	kJ/m^2	ISO 179/1eU
简支梁无缺口冲击强度, -30°C	108	kJ/m^2	ISO 179/1eU
简支梁缺口冲击强度, 23°C	5.2	kJ/m^2	ISO 179/1eA
悬臂梁缺口冲击强度, 23°C	5.4	kJ/m^2	ISO 180/1A
悬臂梁缺口冲击强度, -30°C	5.0	kJ/m^2	ISO 180/1A

热性能

熔融温度, 10°C/min	166	°C	ISO 11357-1/-3
热变形温度, 1.8 MPa	103	°C	ISO 75-1/-2
热变形温度, 0.45 MPa	156	°C	ISO 75-1/-2
线性热膨胀系数, 平行	110	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 垂直	120	E-6/K	ISO 11359-1/-2
熔体导热系数	0.155	W/(m K)	ISO 22007-2
熔体比热容	2210	J/(kg K)	ISO 22007-4

CELCON® M270 ECO-B

CELCON®

其它性能

吸湿率, 2mm	0.2	%	类似ISO 62
吸水率, 2mm	0.75	%	类似ISO 62
吸水率, 浸泡 24小时	0.22	%	类似ISO 62
密度	1410	kg/m³	ISO 1183

注塑

建议干燥	否	
干燥温度	100	°C
干燥时间，除湿干燥机	3 - 4	h
加工前水分含量	≤ 0.2	%
最优熔体温度	185	°C
最低熔体温度***	180	°C
最高熔体温度	190	°C
螺杆最大切线速度	≤ 0.3	m/s
最优模具温度	100	°C
最低模具温度	80	°C
最高模具温度	120	°C
保压范围	60 - 120	MPa
保压时间 (h表示部件的最大壁厚mm)	2h²-3	s
背压	4	MPa
顶出温度	140	°C

特性

加工方法	注塑
添加剂	脱模助剂
特殊性能	高流动性
可持续	生物基

其他信息

注塑

Preprocessing

Drying is generally not required because Celcon® and Hostaform® acetal copolymers are not hydroscopic nor are they degraded by moisture during processing. Excessive moisture can lead to splay (silver streaking) in molded parts. For better uniformity in molding especially when using regrind or material that has been stored in containers open to the atmosphere, recommended drying conditions are 80 C (180 F) for 3hours. Desiccant hopper dryers are not required. Maximum water content = 0.35%

Processing

Standard reciprocating screw injection molding machines with a high compression screw (minimum 3:1 and preferably 4:1) and low back pressure (0.35 Mpa/50 PSI) are favored. Using a low compression screw (I.E. general purpose 2:1 compression ratio) can result in unmelted particles and poor melt

homogeneity. Using a high back pressure to make up for a low compression ratio may lead to excessive shear heating and deterioration of the material.

Melt Temperature: Preferred range 182-199 C (360-390 F). Melt temperature should never exceed 230 C (450 F).

Mold Surface Temperature: Preferred range 82-93 C (180-200 F) especially with wall thickness less than 1.5 mm (0.060 in.). May require mold temperature as high as 120 C (250 F) to reproduce mold surface or to assure minimal molded in stress. Wall thickness greater than 3mm (1/8 in.) may use a cooler (65 C/150 F) mold surface temperature and wall thickness over 6mm (1/4 in.) may use a cold mold surface down to 25 C (80 F). In general, mold surface temperatures lower than 82 C (180 F) may hinder weld line formation and produce a hazy surface or a surface with flow lines, pits and other included defects that can hinder part performance.

Postprocessing

Postprocessing conditioning and moisturizing are not required. It may be necessary to fixture large or complicated parts with varying wall thickness to prevent warpage while cooling to ambient temperature.

加工注意事项

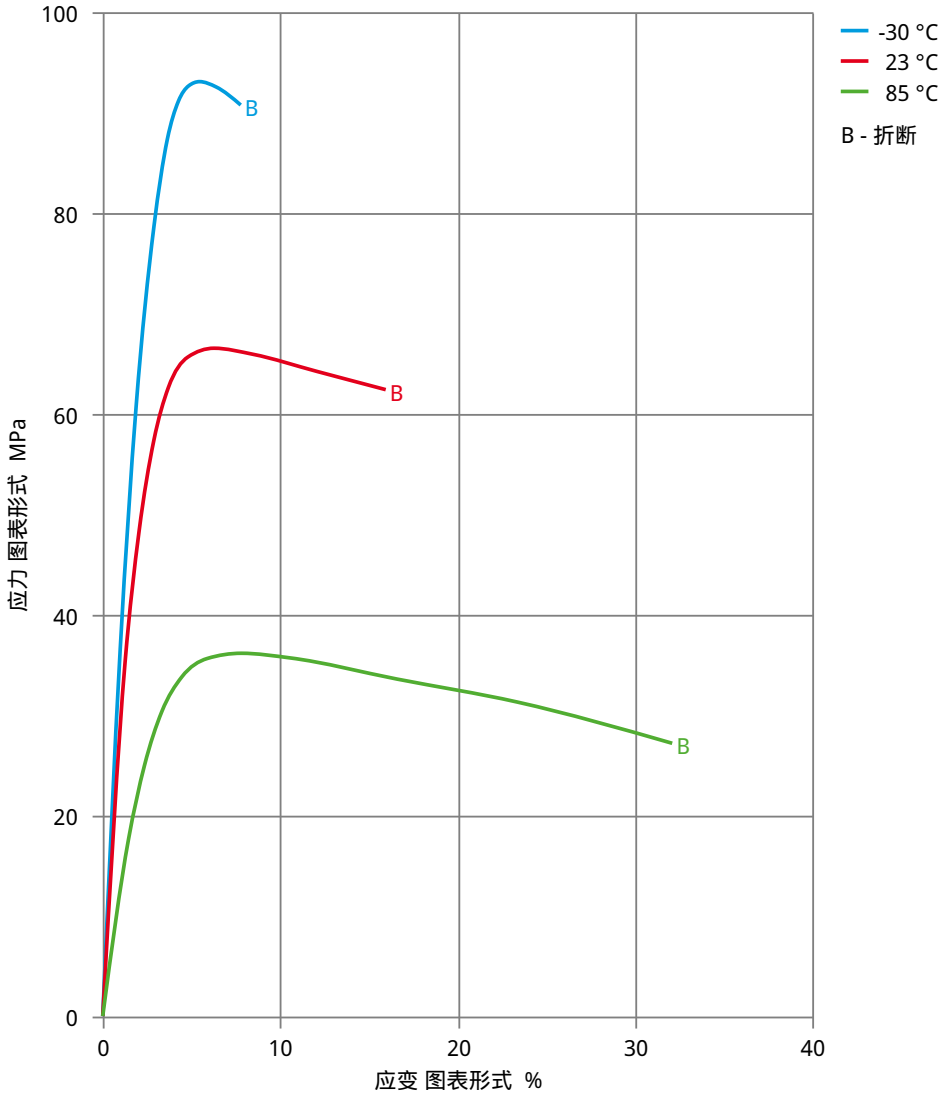
Pre-Drying

Drying is not normally required. If material has come in contact with moisture through improper storage or handling or through regrind use, drying may be necessary to prevent splay and odor problems.

CELCON® M270 ECO-B

CELCON®

应力 - 应变

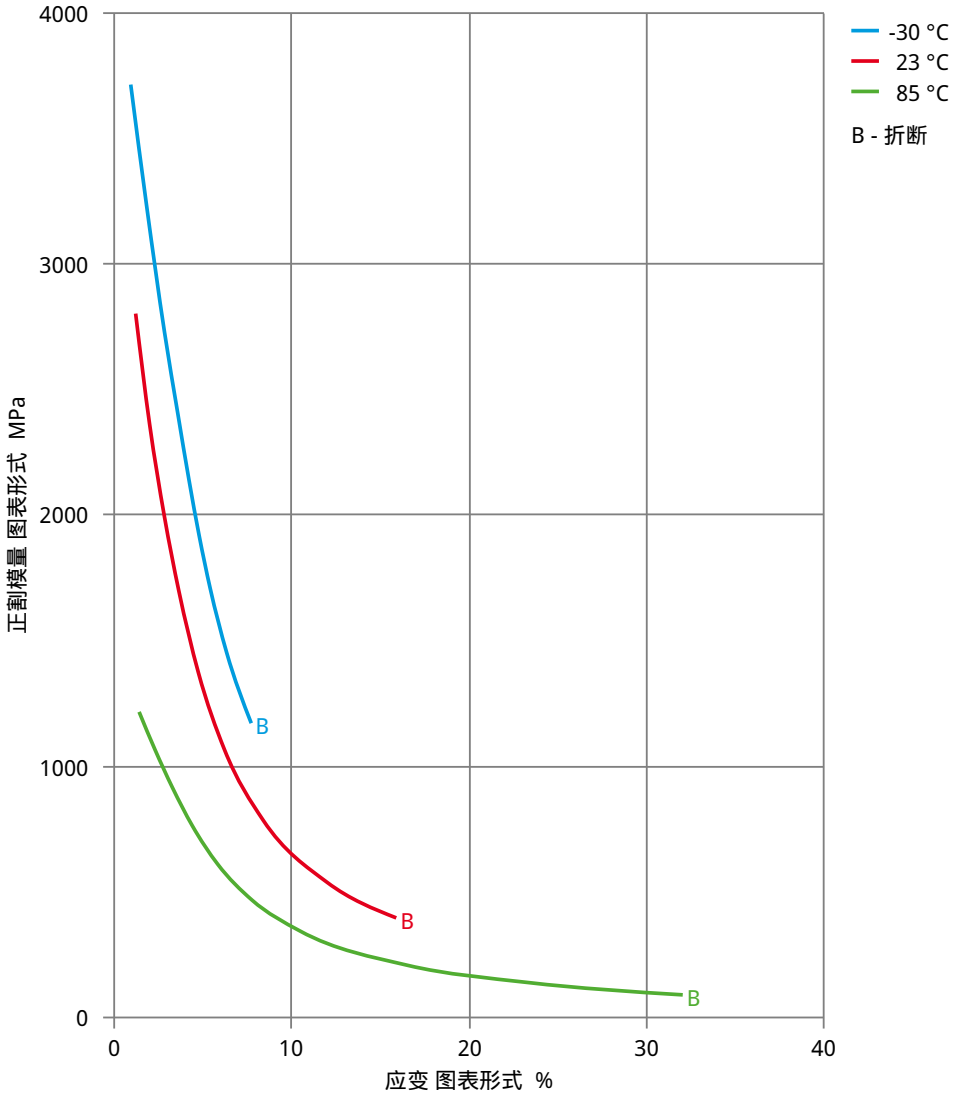


Revised: 2025-07-24 Source: Celanese Materials Database

CELCON® M270 ECO-B

CELCON®

正割模量 - 应变



Revised: 2025-07-24 Source: Celanese Materials Database

用户须知： 所示数值基于实验室试样测试，代表本色材料标准属性范围内的数据。这些数值本身并不能作为任何部件设计的充分依据，且不旨在用于确定最大值、最小值或规格值范围。着色剂或其他添加剂可能会导致数据值的显著变化。模塑部件的性能会受到多种因素的影响，包括但不限于材料选择、添加剂、部件设计、加工条件和环境暴露。除了那些明确标识为医用级的产品（包括 MT® 产品标识或其他标识），塞拉尼斯的产品不旨在用于医疗或牙科植入。无论产品名称如何，确定特定材料和部件设计是否适用于用户所拟的任何用途以及使用方式是用户自身的责任，用户必须保证后续加工的材料满足其特定产品或用途的需要。据我们所知，本出版物中包含的信息是准确的；但是，我们对此处信息的准确性和完整性不承担任何责任。本出版物中包含的信息不应被视为对我们产品特定性能的承诺或保证。用户应自行负责调查使用本出版物中提及的材料是否侵犯了任何现有专利。此外，考虑到可能产生的不良影响，有必要将人类与许多材料的接触降至最低实际限度。对于本出版物中提到的任何危害，我们既不建议也不保证这些危害是唯一存在的危害。我们建议，打算依赖本出版物中的任何建议或使用本出版物中提及的任何设备、加工技术或材料的人，应确信他们能够满足所有适用的安全和健康标准。我们强烈建议用户在处理每种材料时，都要寻求并遵守制造商的最新说明，并且只委托受过适当培训的人员来处理这些材料。请拨打所列电话号码，了解更多技术信息。在尝试处理我们的产品之前，请致电客户服务部索取相应的材料安全数据表 (MSDS)。
(Copyright) 2026 塞拉尼斯或其附属公司。保留所有权利。
除非另有说明，Celanese®、注册的 C-ball 设计和本文中标有 ®、TM、SM 的所有其他商标均为 Celanese 或其附属公司的商标。