

Delrin® 100CPE NC010

ACETAL RESIN

Common features of Delrin® acetal resins include mechanical and physical properties such as high mechanical strength and rigidity, excellent fatigue and impact resistance, as well as resistance to moisture, gasoline, lubricants, solvents, and many other neutral chemicals. Delrin® acetal resins also have excellent dimensional stability and good electrical insulating characteristics. They are naturally resilient, self-lubricating, and available in a variety of colors and speciality grades.

Delrin® acetal resin typically is used in demanding applications in the automotive, domestic appliances, sports, industrial engineering, electronics, and consumer goods industries.

Delrin® 100CPE is a high viscosity acetal homopolymer for use in easy-to-fill moulds with very low VOC emissions. Delrin® 100CPE provides optimum mechanical performance with its excellent combination of toughness and strength with improved processing, thermal stability and productivity for injection moulding.

总说明

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, MVR	1.9 cm ³ /10min	ISO 1133
熔体质量流动速率	2.3 g/10min	ISO 1133
温度	190 °C	ISO 1133
负荷	2.16 kg	ISO 1133
熔体质量流率, 温度	190 °C	ISO 1133
熔体质量流率, 载荷	2.16 kg	ISO 1133
模塑收缩率, 平行	2.2 %	ISO 294-4, 2577
模塑收缩率, 垂直	1.9 %	ISO 294-4, 2577

机械性能

拉伸模量	2900 MPa	ISO 527-1/-2
屈服应力	71 MPa	ISO 527-1/-2
屈服伸长率	28 %	ISO 527-1/-2
名义断裂伸长率	45 %	ISO 527-1/-2
弯曲模量	2800 MPa	ISO 178
弯曲应力 (3.5%应变)	76 MPa	ISO 178
简支梁无缺口冲击强度, +23°C	N kJ/m ²	ISO 179/1eU
简支梁无缺口冲击强度, -30°C	450 kJ/m ²	ISO 179/1eU
简支梁缺口冲击强度, +23°C	15 kJ/m ²	ISO 179/1eA
简支梁缺口冲击强度, -30°C	13 kJ/m ²	ISO 179/1eA
洛氏硬度, M	90	ISO 2039-2
洛氏硬度, R	120	ISO 2039-2
Poisson's ratio	0.37	

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热性能

熔融温度, 10°C/min	178 °C	ISO 11357-1/-3
热变形温度, 1.80 MPa	95 °C	ISO 75-1/-2
热变形温度, 0.45 MPa	160 °C	ISO 75-1/-2
线性热膨胀系数, 平行, -40-23°C	95 E-6/K	ISO 11359-1/-2
线膨胀系数, 平行	110 E-6/K	ISO 11359-1/-2
线性热膨胀系数, 垂直, -40-23°C	100 E-6/K	ISO 11359-1/-2
线膨胀系数, 垂直	100 E-6/K	ISO 11359-1/-2
固态导热系数	0.39 W/(m K)	ISO 22007-2
相对温度指数, 电气性能, 0.75mm	50 °C	UL 746B
相对温度指数, 电气性能, 1.5mm	110 °C	UL 746B
相对温度指数, 电气性能, 3mm	110 °C	UL 746B
相对温度指数, 冲击, 0.75mm	50 °C	UL 746B
相对温度指数, 冲击, 1.5mm	85 °C	UL 746B
相对温度指数, 冲击, 3mm	90 °C	UL 746B
相对温度指数, 强度, 0.75mm	50 °C	UL 746B
相对温度指数, 强度, 1.5mm	90 °C	UL 746B
相对温度指数, 强度, 3mm	95 °C	UL 746B

燃烧性能

1.5mm名义厚度时的燃烧性	HB class	IEC 60695-11-10
测试用试样的厚度	1.5 mm	IEC 60695-11-10
UL注册	yes	UL 94
厚度为h时的燃烧性	HB class	IEC 60695-11-10
测试用试样的厚度	0.8 mm	IEC 60695-11-10
UL注册	yes	UL 94
FMVSS Class	B	ISO 3795 (FMVSS 302)
燃烧速率, 厚度: 1毫米	23 mm/min	ISO 3795 (FMVSS 302)

电性能

相对介电常数, 100Hz	4.1	IEC 62631-2-1
相对介电常数, 1MHz	4	IEC 62631-2-1
介质损耗因子, 100Hz	25 E-4	IEC 62631-2-1
介质损耗因子, 1MHz	45 E-4	IEC 62631-2-1
体积电阻率	>1E13 Ohm.m	IEC 62631-3-1
表面电阻率	6E14 Ohm	IEC 62631-3-2
相对漏电起痕指数	600	IEC 60112

其它性能

吸湿性, 2mm	0.1 %	类似ISO 62
吸水性, 2mm	1 %	类似ISO 62
密度	1420 kg/m ³	ISO 1183
熔体密度	1180 kg/m ³	

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VDA性能

甲醛散发	<2 mg/kg	VDA 275
有机化合物的排放	0.3 µgC/g	VDA 277
有机废气的热解吸分析	0.6 µg/g	VDA 278
雾化	81 %	ISO 6452
雾化	1 mg	ISO 6452

注塑

建议干燥	是
干燥温度	80 °C
干燥时间, 除湿干燥机	2 - 4 h
加工前水分含量	≤ 0.2 %
最优熔体温度	205 °C
注塑 熔体温度	200 °C
注塑 熔体温度	210 °C
螺杆最大切线速度	0.2 m/s
最优模具温度	90 °C
模具温度	80 °C
模具温度	100 °C
保压范围	90 - 110 MPa
保压时间	8 s/mm
回火时间, 可选	30 ^[1] min/mm
回火温度	160 °C

[1]: 30 min + 5 min/mm of thickness

薄膜挤出成型

干燥温度	75 - 85 °C
干燥时间, 除湿干燥机	2 - 4 h
加工前水分含量	≤ 0.2 %
最优熔体温度	200 °C
熔体温度范围	195 - 205 °C

成型

注塑

Drying is recommended, but not necessary for newly opened packaging stored in a dry location.

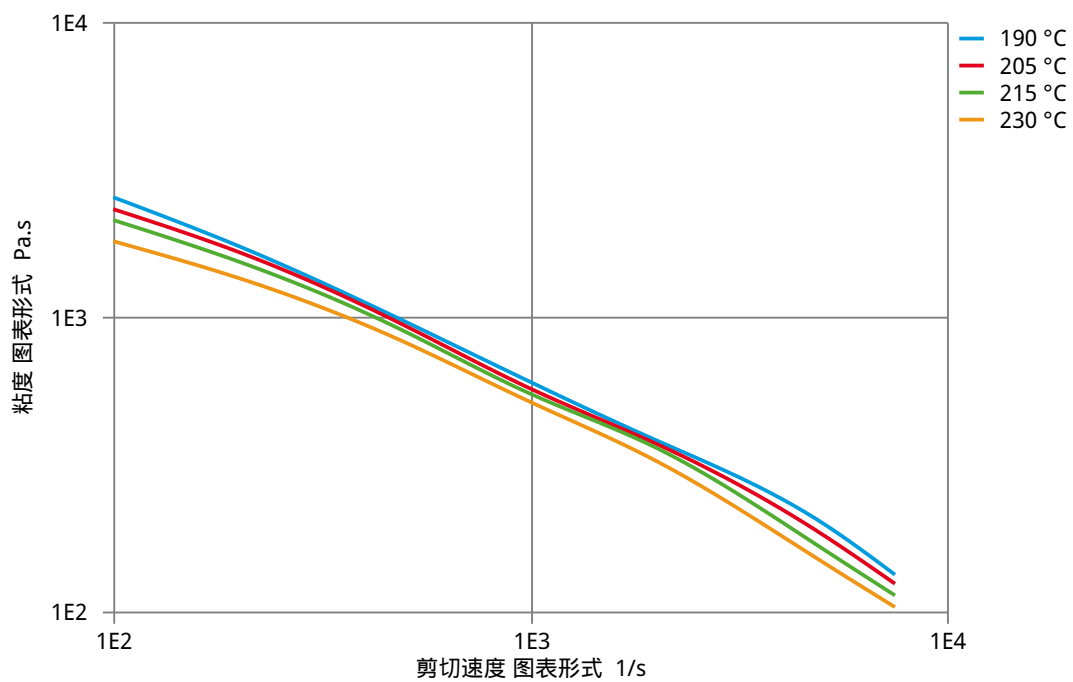
Follow the drying guidelines above in the following cases:

- If moisture is above the Processing Moisture Content recommendation,
- When a resin container is damaged,
- When the material is not properly stored in a dry place at room temperature, or
- When packaging stays open for a significant time.

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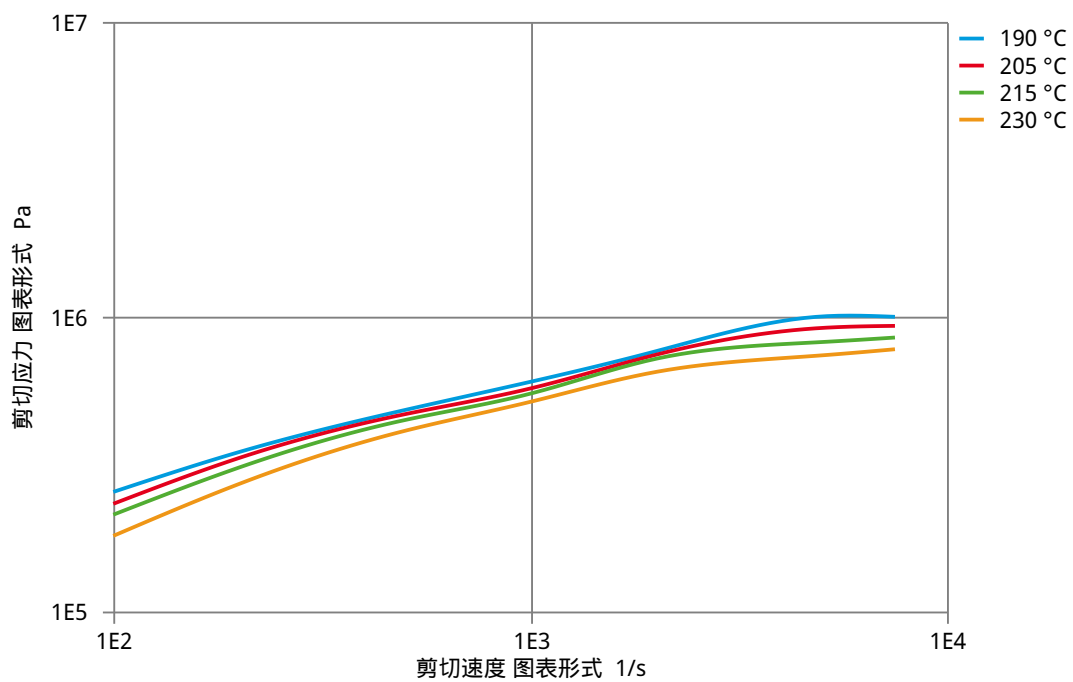
粘度 - 剪切速度



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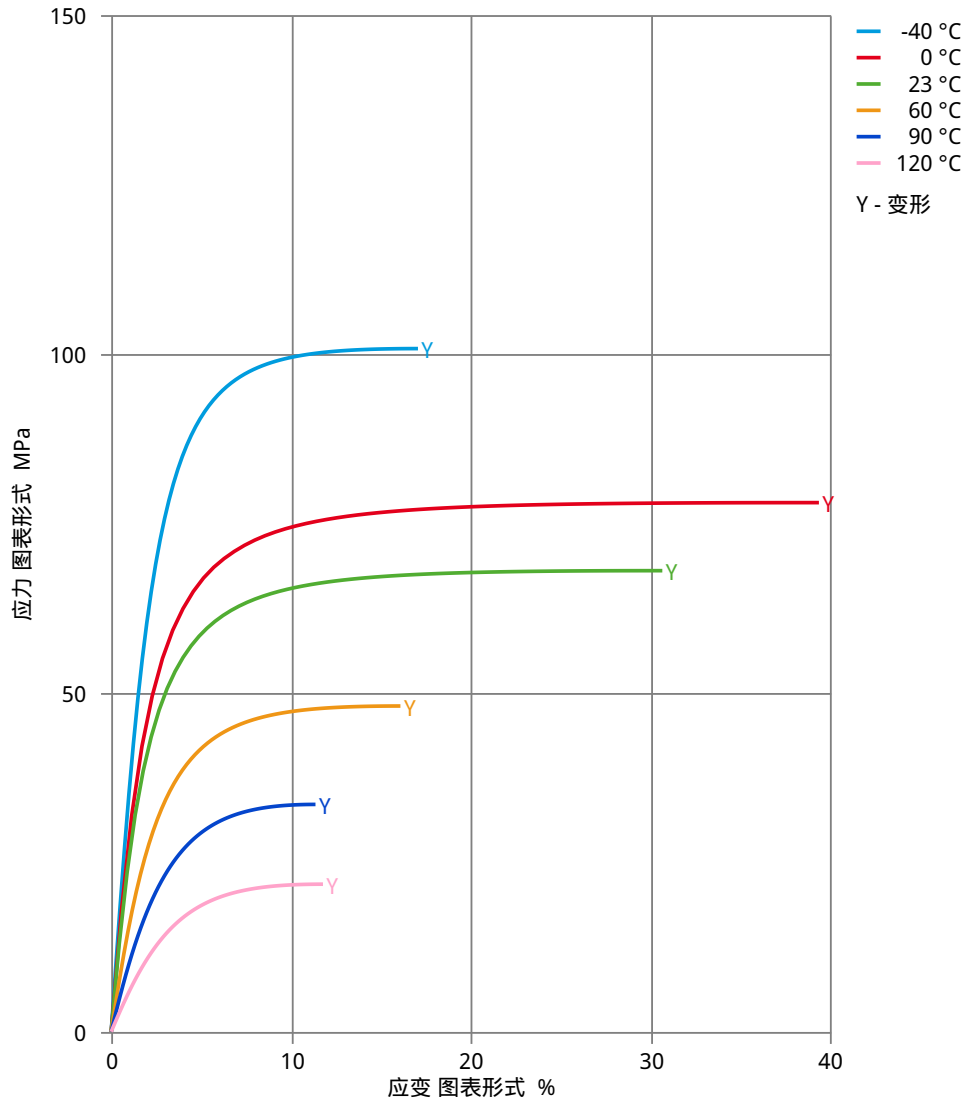
剪切应力 - 剪切速度



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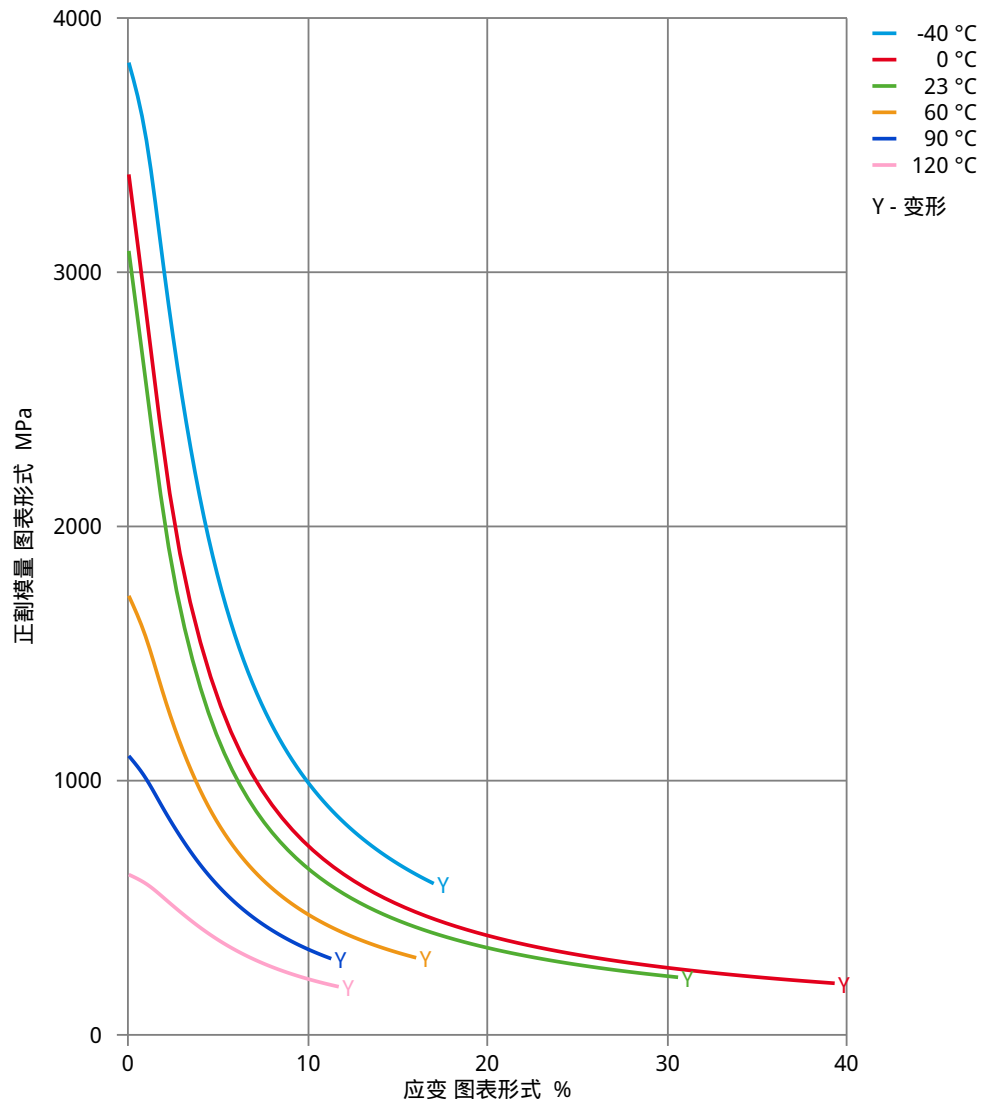
应力 - 应变.



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ACETAL RESIN

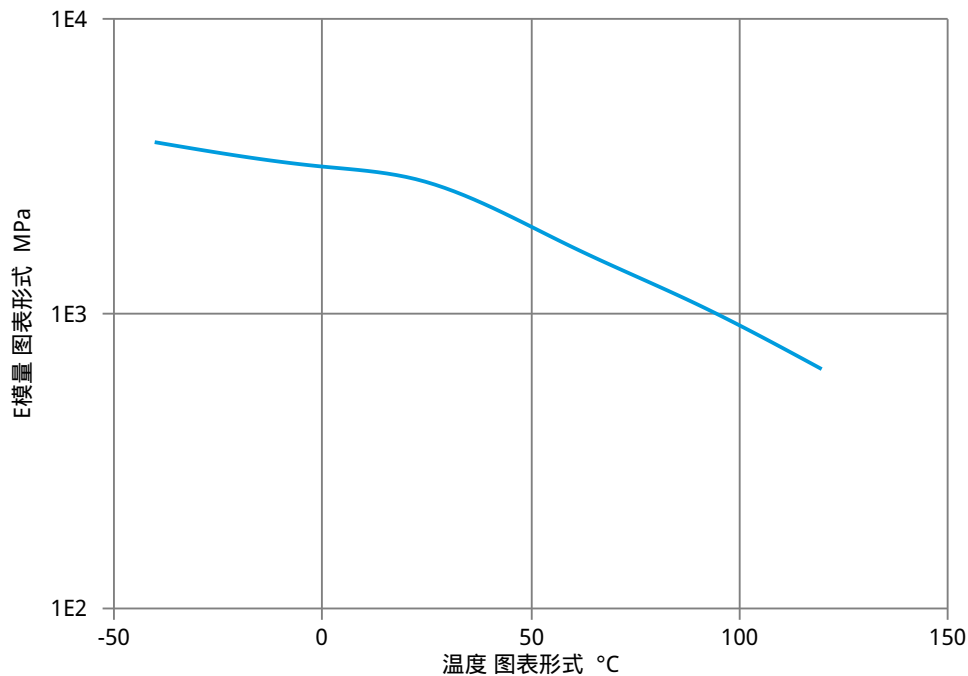
正割模量 - 应变.



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拉伸模量 - 温度



Delrin

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