

# DuPont™ Delrin® PC690 NC010

## ACETAL RESIN

### 产品

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® PC690 is a low viscosity acetal homopolymer, developed for thin-walled parts requiring high precision moulding in the healthcare industry.**

### PREMIUM CONTROL for HEALTHCARE APPLICATIONS

This product is manufactured according to Good Manufacturing Practice (GMP) principles and generally accepted in food contact applications in Europe and the USA when meeting applicable use conditions. This product is also tested against ISO 10993-5 and -11 and selected parts of USP Class VI and US FDA drug and device master files (DMF and MAF) have been established. For details, individual compliance statements are available from your DuPont representative.

总说明	数值	单位	测试标准
树脂鉴别	POM	-	ISO 1043
产品标识码	POM	-	ISO 11469
流变性能	数值	单位	测试标准
熔体体积流动速度, MVR	21	cm³/10min	ISO 1133
温度	190	°C	ISO 1133
负荷	2.16	kg	ISO 1133
熔体质量流动速率	25	g/10min	ISO 1133
模塑收缩率, 平行	1.9	%	ISO 294-4, 2577
模塑收缩率, 垂直	1.9	%	ISO 294-4, 2577
机械性能	数值	单位	测试标准
拉伸模量	3300	MPa	ISO 527-1/-2
屈服应力	71	MPa	ISO 527-1/-2
屈服伸长率	12	%	ISO 527-1/-2
名义断裂伸长率	23	%	ISO 527-1/-2
弯曲模量	3000	MPa	ISO 178
拉伸蠕变模量			ISO 899-1
1h	2800	MPa	
1000h	1500	MPa	
无缺口简支梁冲击强度			ISO 179/1eU
+23°C	200	kJ/m²	
-30°C	200	kJ/m²	
简支梁缺口冲击强度			ISO 179/1eA
+23°C	8	kJ/m²	
-30°C	7	kJ/m²	
悬臂梁缺口冲击强度			ISO 180/1A
23°C	7	kJ/m²	
-40°C	8	kJ/m²	
洛氏硬度	92	-	ISO 2039-2
洛氏硬度, Rockwell	120	-	ISO 2039-2
热性能	数值	单位	测试标准
熔融温度, 10°C/min	178	°C	ISO 11357-1/-3
热变形温度			ISO 75-1/-2
1.80 MPa	94	°C	
0.45 MPa	162	°C	
维卡软化温度, 50°C/h 50N	160	°C	ISO 306
线膨胀系数, 平行	120	E-6/K	ISO 11359-1/-2

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

North America

Asia Pacific

Europe/Middle East/Africa

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线膨胀系数			
垂直	120	E-6/K	ISO 11359-1/-2
平行, 23-55°C	104	E-6/K	ASTM E 831
相对温度指数, 电气性能			UL 746B
0.75mm	50	°C	
1.5mm	110	°C	
3mm	110	°C	
相对温度指数, 冲击性能			UL 746B
0.75mm	50	°C	
1.5mm	85	°C	
3mm	90	°C	
相对温度指数, 强度			UL 746B
0.75mm	50	°C	
1.5mm	90	°C	
3mm	95	°C	
<b>燃烧性能</b>	<b>数值</b>	<b>单位</b>	<b>测试标准</b>
极限氧指数	23	%	ASTM D 2863
电热丝起燃	8 <sup>[1]</sup>	s	UL 746A
1: 0.75mm			
<b>电性能</b>	<b>数值</b>	<b>单位</b>	<b>测试标准</b>
相对介电常数.			IEC 62631-2-1
100Hz	3.8	-	
1MHz	3.8	-	
介质损耗因子, 1MHz	50	E-4	IEC 62631-2-1
体积电阻率	1E12	Ohm*m	IEC 62631-3-1
表面电阻率	>1E15	Ohm	IEC 62631-3-2
相对漏电起痕指数	600	-	IEC 60112
<b>其它性能</b>	<b>数值</b>	<b>单位</b>	<b>测试标准</b>
吸湿性, 2mm	0.3	%	类似ISO 62
吸水性, 2mm	1.4	%	类似ISO 62
密度	1420	kg/m <sup>3</sup>	ISO 1183
<b>VDA性能</b>	<b>数值</b>	<b>单位</b>	<b>测试标准</b>
挥发性	<8	mg/kg	VDA 275
雾化	95	%	ISO 6452
雾化	0.2	mg	ISO 6452
<b>注塑</b>	<b>数值</b>	<b>单位</b>	<b>测试标准</b>
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	215	°C	-
注塑 熔体温度	210	°C	-
注塑 熔体温度	220	°C	-
最优模具温度	90	°C	-
模具温度	80	°C	-
模具温度	100	°C	-
保压范围	80 - 100	MPa	-
保压时间	8	s/mm	-
回火时间, 可选	30	min/mm	-
回火温度	160	°C	-
<b>典型数据</b>			
加工方法			• 注塑
供货形式			• 粒料
添加剂			• 润滑剂                      • 脱模助剂

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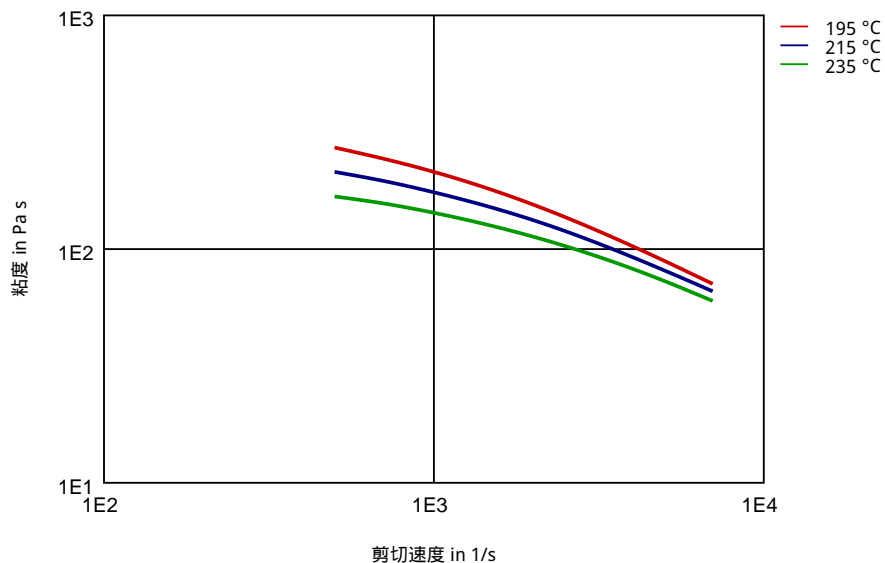


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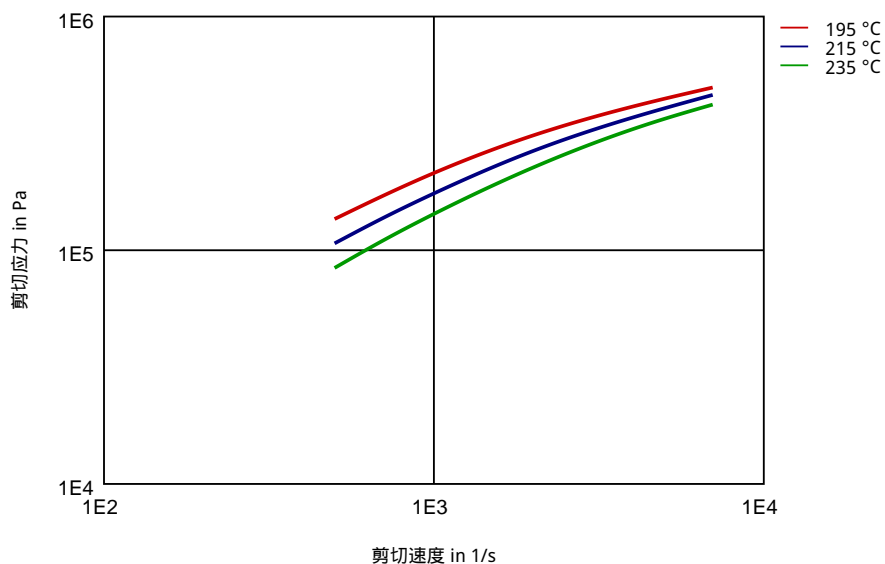
## ACETAL RESIN

图表

粘度 - 剪切速度



剪切应力 - 剪切速度



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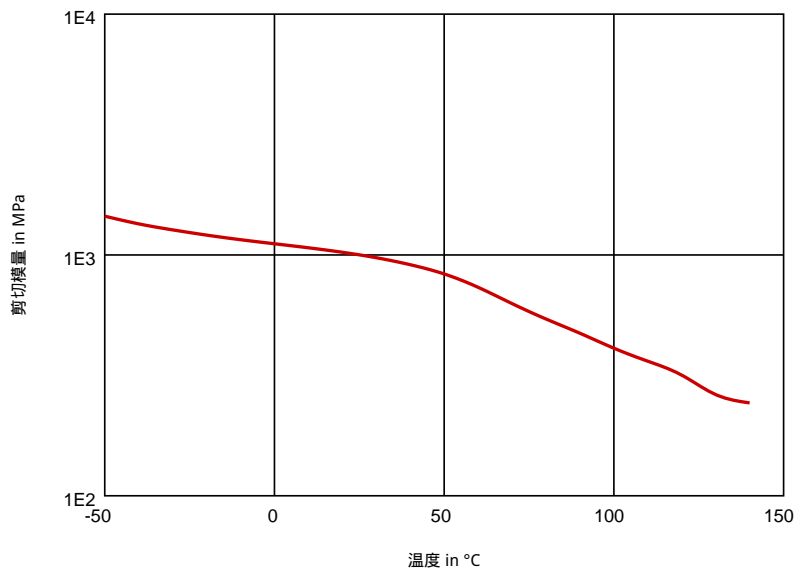
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## ACETAL RESIN

动态剪切模量 - 温度



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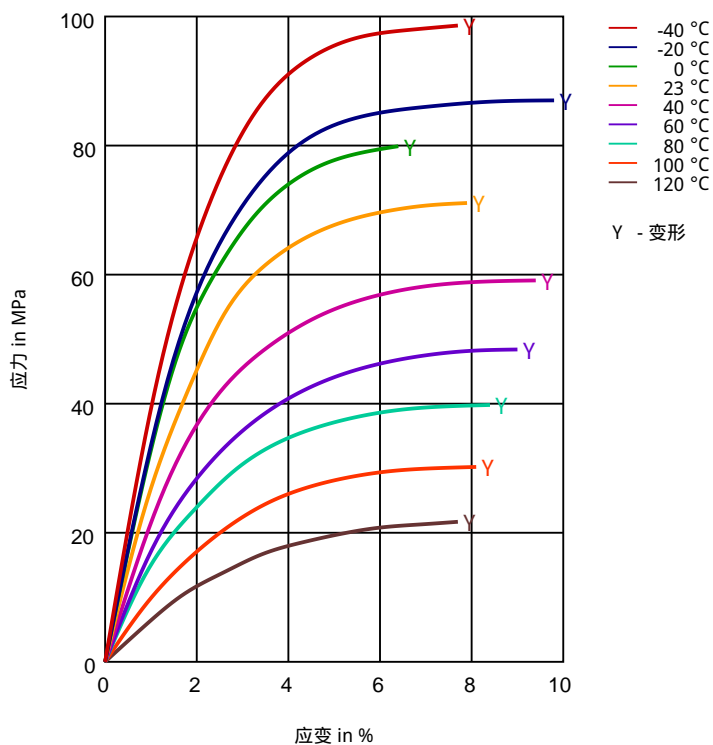
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## ACETAL RESIN

应力 - 应变.



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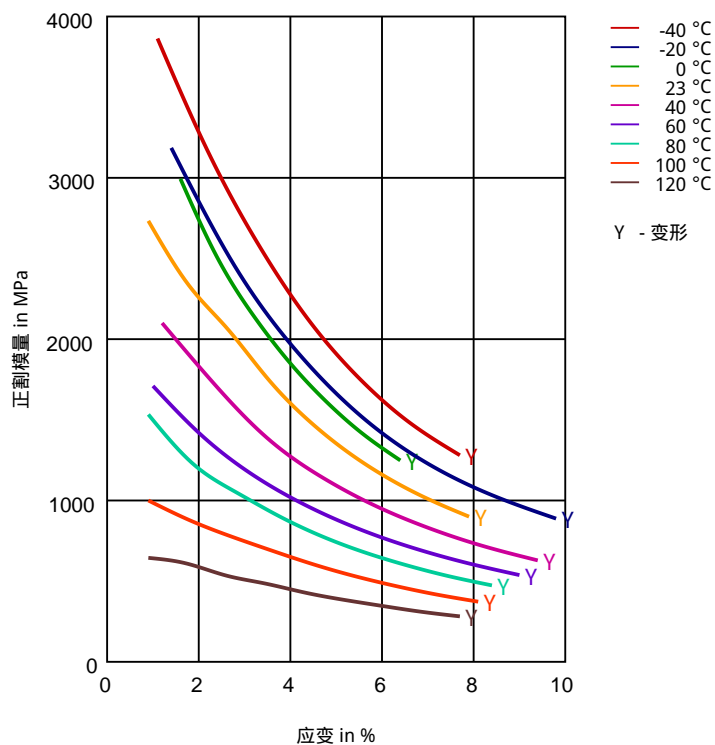
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## ACETAL RESIN

正割模量 - 应变.



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## ACETAL RESIN

### 耐化学性

### 抑菌方法

✓ 环氧乙烷

#### Symbols used:

✓ possibly resistant

Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

✗ not recommended - see explanation

Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

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