



# Delrin® 510GR NC000

## ACETAL RESIN

Delrin®聚甲醛树脂的共性包括优异的机械性能和物理性能比如高机械强度和刚性，优异的耐疲劳性能和抗冲击性，同时具有突出的耐潮湿、汽油、润滑剂、溶剂和多种其他中性化学品。Delrin®聚甲醛树脂还具有优良尺寸稳定性和良好的电绝缘性能，具有天然弹性、自润滑，可制成多种颜色和特殊规格。

Delrin®聚甲醛树脂通常应用于具有严苛要求的汽车、家用电器、运动、工业工程、电子和消费品工业。

Delrin® 510GR NC000是一种10% 玻纤增强 中等粘度均聚甲醛

### 总说明

树脂鉴别	POM-GF10	ISO 1043
制品标识码	>POM-GF10<	ISO 11469

### 流变性能

熔体体积流动速度, MVR	12 cm <sup>3</sup> /10min	ISO 1133
温度	190 °C	ISO 1133
负荷	2.16 kg	ISO 1133
模塑收缩率, 平行	1.0 %	ISO 294-4, 2577
模塑收缩率, 垂直	1.4 %	ISO 294-4, 2577

### 机械性能

拉伸模量	5500 MPa	ISO 527-1/-2
断裂应力	105 MPa	ISO 527-1/-2
断裂伸长率	3.7 %	ISO 527-1/-2
弯曲模量	5250 MPa	ISO 178
弯曲强度	175 MPa	ISO 178
弯曲应力 (3.5%应变)	160 MPa	ISO 178
拉伸蠕变模量, 1h	4800 MPa	ISO 899-1
拉伸蠕变模量, 1000h	3500 MPa	ISO 899-1
简支梁无缺口冲击强度, +23°C	50 kJ/m <sup>2</sup>	ISO 179/1eU
简支梁无缺口冲击强度, -30°C	50 kJ/m <sup>2</sup>	ISO 179/1eU
简支梁缺口冲击强度, +23°C	6.5 kJ/m <sup>2</sup>	ISO 179/1eA
简支梁缺口冲击强度, -30°C	5 kJ/m <sup>2</sup>	ISO 179/1eA
悬臂梁缺口冲击强度, 23°C	5 kJ/m <sup>2</sup>	ISO 180/1A
洛氏硬度	100 -	ISO 2039-2
洛氏硬度, Rockwell	122 -	ISO 2039-2
Poisson's ratio	0.35 -	



# Delrin<sup>®</sup> 510GR NC000

## ACETAL RESIN

### 热性能

熔融温度, 10°C/min	178 °C	ISO 11357-1/-3
热变形温度, 1.80 MPa	164 °C	ISO 75-1/-2
热变形温度, 0.45 MPa	174 °C	ISO 75-1/-2
维卡软化温度, 50°C/h 50N	160 °C	ISO 306
线膨胀系数, 平行	70 E-6/K	ISO 11359-1/-2
线膨胀系数, 垂直	100 E-6/K	ISO 11359-1/-2
相对温度指数, 电气性能, 0.75mm	50 °C	UL 746B
相对温度指数, 冲击, 0.75mm	50 °C	UL 746B
相对温度指数, 强度, 0.75mm	50 °C	UL 746B

### 燃烧性能

厚度为h时的燃烧性	HB class	IEC 60695-11-10
测试用试样的厚度	0.75 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	46 mm/min	ISO 3795 (FMVSS 302)

### 电性能

相对介电常数., 100Hz	3.7 -	IEC 62631-2-1
相对介电常数., 1MHz	3.9 -	IEC 62631-2-1
体积电阻率	1E11 Ohm.m	IEC 62631-3-1
相对漏电起痕指数	600 -	IEC 60112

### 其它性能

吸湿性, 2mm	0.16 %	类似ISO 62
吸水性, 2mm	1.1 %	类似ISO 62
密度	1490 kg/m <sup>3</sup>	ISO 1183

### VDA性能

雾化	0.65 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 %
熔体温度	215 °C 注
塑 熔体温度	210 °C
注塑 熔体温度	220 °C
螺杆切线速度	0.3 m/s
模具温度	90 °C
模具温度	80 °C



# Delrin<sup>®</sup> 510GR NC000

## ACETAL RESIN

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

### 典型数据

添加剂

脱模助剂

### 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:

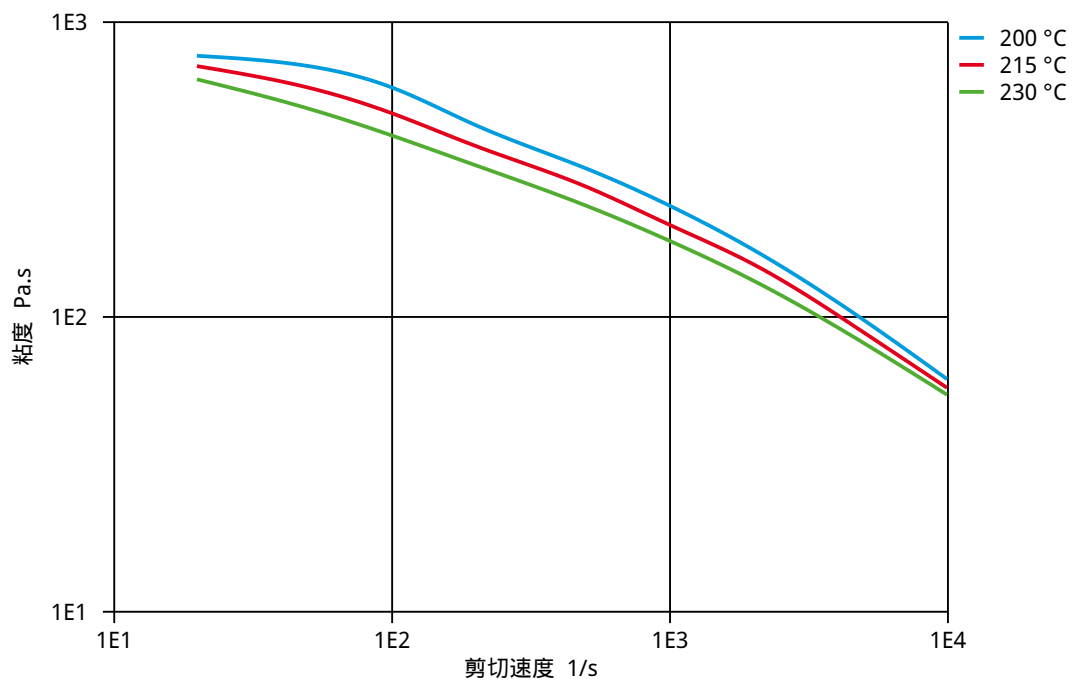
- If moisture is above the Processing Moisture Content recommendation,
- When a resin container is damaged,
- When the material is not properly stored in a dry place at room temperature, or
- When packaging stays open for a significant time.



# Delrin<sup>®</sup> 510GR NC000

ACETAL RESIN

粘度 - 剪切速度

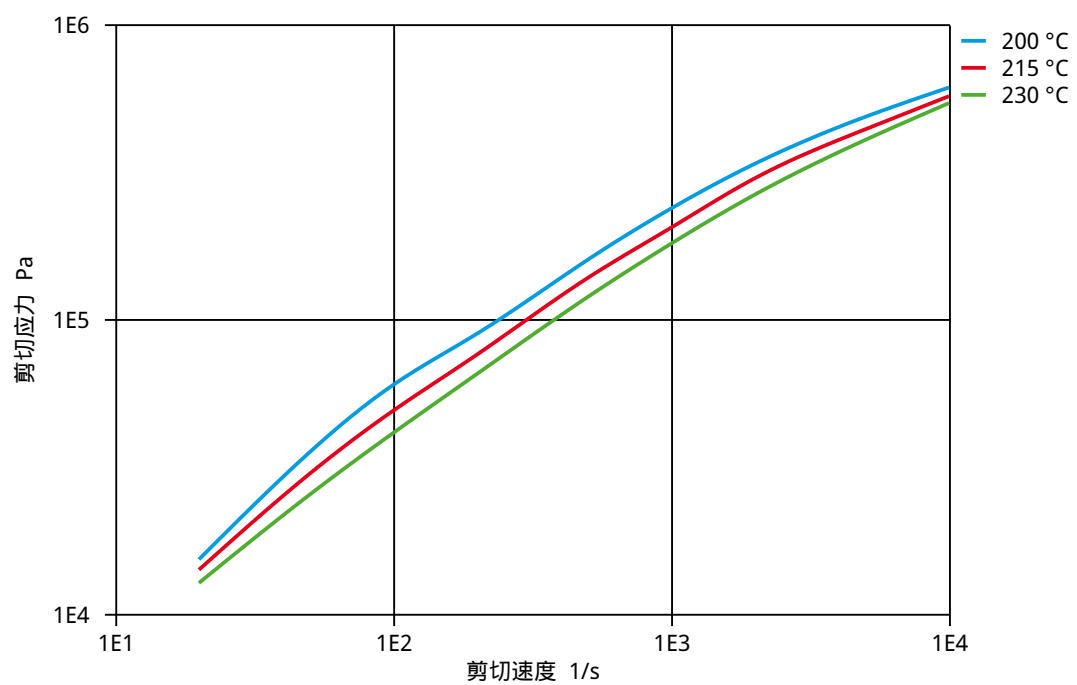




# Delrin<sup>®</sup> 510GR NC000

ACETAL RESIN

剪切应力 - 剪切速度

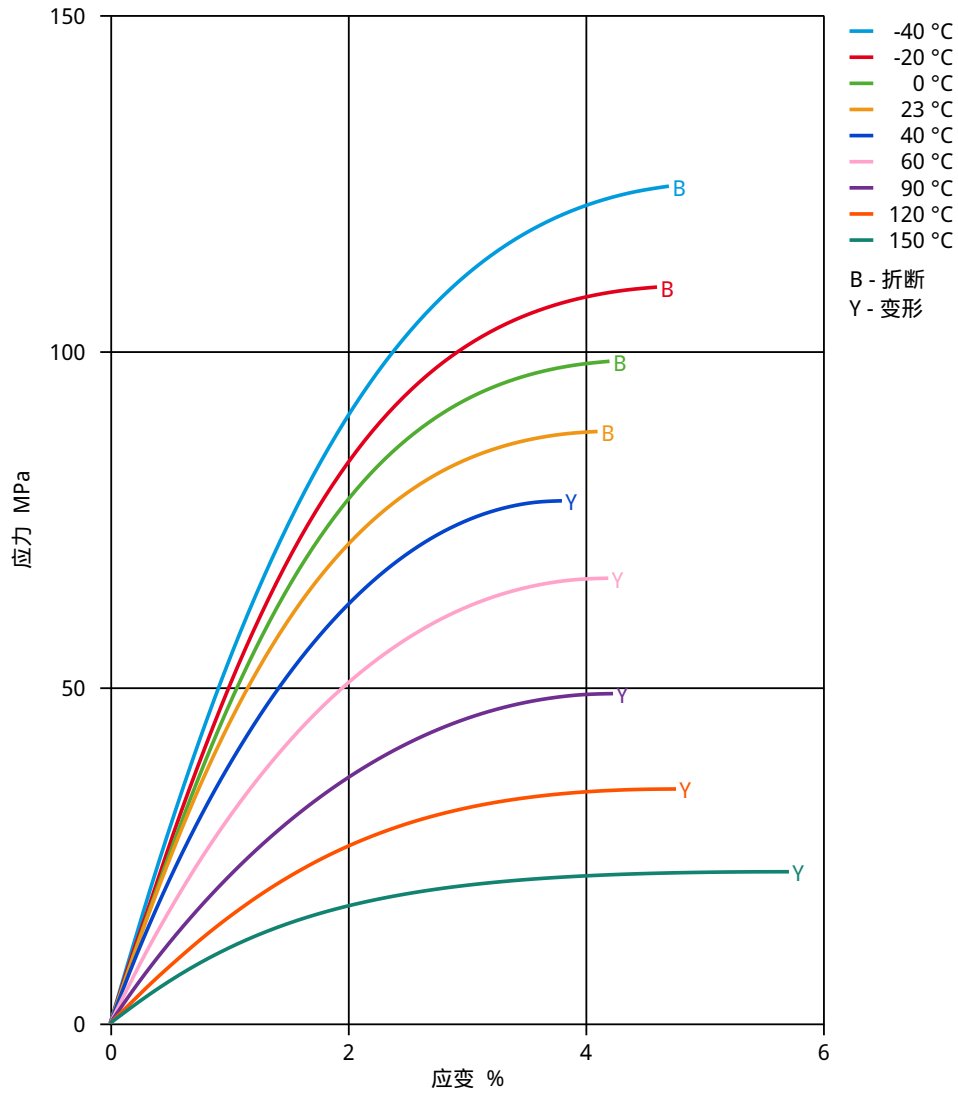




# Delrin<sup>®</sup> 510GR NC000

ACETAL RESIN

应力 - 应变.

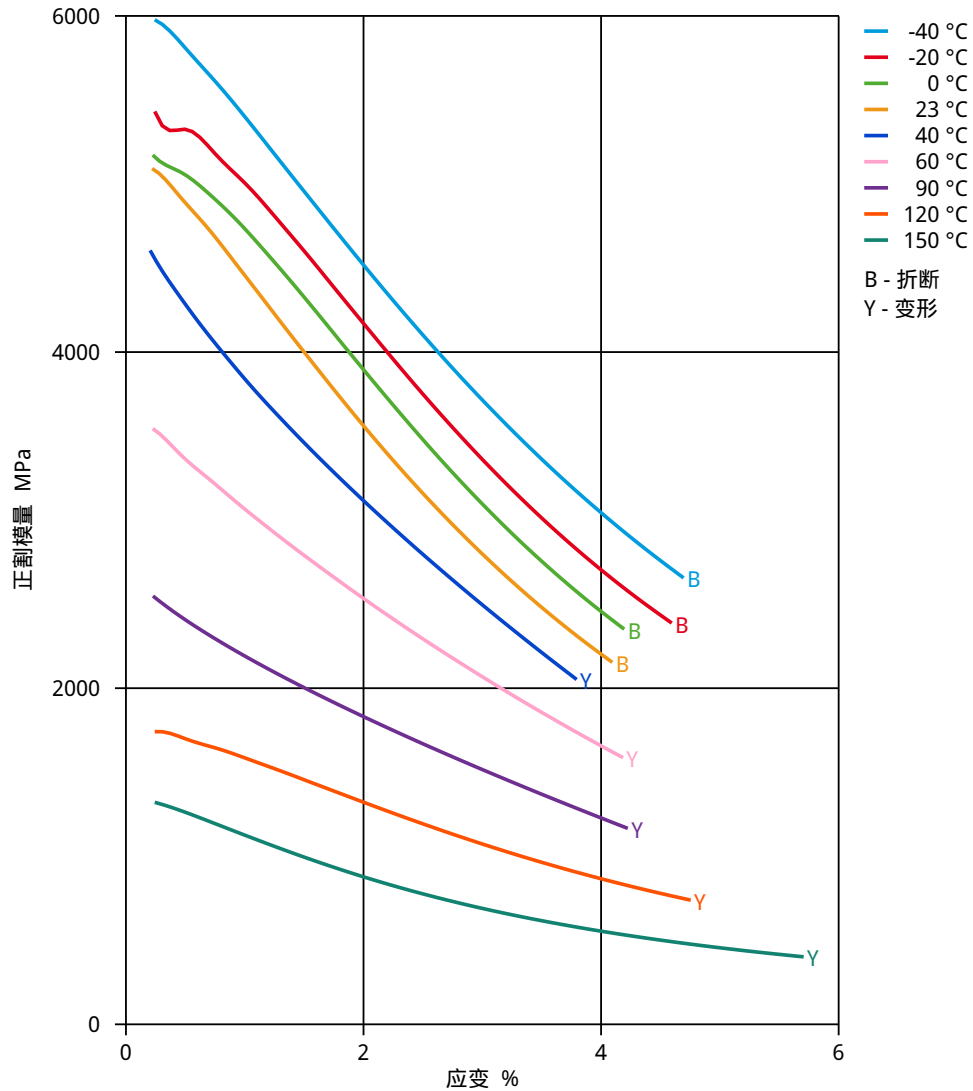




# Delrin<sup>®</sup> 510GR NC000

ACETAL RESIN

正割模量 - 应变.



Revised: 2021-09-23

Page: 7 of 7

dupont.com

The information set forth herein is furnished free of charge, is based on technical data that DuPont believes to be reliable, and represents typical values that fall within the normal range of properties. This information relates only to the specific material designated and may not be valid for such material used in combination with other materials or in other processes. It is intended for use by persons having technical skill, at their own discretion and risk. This information should not be used to establish specification limits nor used alone as the basis of design. Handling precaution information is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards and comply with applicable law. Since conditions of product use and disposal are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. As with any product, evaluation under end-use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate or a recommendation to infringe on patents.

CAUTION: Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract or other acknowledgement that is consistent with the DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative.

DuPont's sole warranty is that our products will meet our standard sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DUPONT SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR NON-INFRINGEMENT. DUPONT DISCLAIMS LIABILITY FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, SM or ® are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted.

© 2021 DuPont. All rights reserved.