



# Zytel® 73G45L NC010

## NYLON RESIN

Zytel® 尼龙树脂的共性包括良好的机械和物理性能，例如高机械强度，刚性和韧性之间良好的平衡，良好的高温性能、电性能和阻燃性能，优异的耐磨损和耐化学品性能。另外，Zytel®

尼龙树脂有不同改性和增强规格为特殊加工和终端客户提供定制的性能。Zytel®

尼龙树脂，包括大多数阻燃规格，提供了染色可能性。

Zytel® 尼龙树脂良好的热稳定性通常使正确处理的生产废弃物回收成为可能。如果不能回收使用，杜邦建议的优先选择是在合适的装置中焚烧进行能量回收（基体树脂-31kJ/g）。废弃处理需遵守当地法规。

Zytel® 尼龙树脂通常应用于要求严苛的汽车、家具、家用电器、运动器材和建筑业。

Zytel® 73G45L NC010是一种45% 玻纤增强 尼龙6

### 总说明

树脂鉴别	PA6-GF45	ISO 1043
制品标识码	>PA6-GF45<	ISO 11469
ISO名称	ISO 16396-PA6,GF45,M1GNR,S14-140	

### 流变性能

	dry/cond.		
粘数.	148/*	cm <sup>3</sup> /g	ISO 307, 1157, 1628
模塑收缩率, 平行	0.1/-	%	ISO 294-4, 2577
模塑收缩率, 垂直	0.6/-	%	ISO 294-4, 2577

### 机械性能

	dry/cond.		
拉伸模量	14500/9700	MPa	ISO 527-1/-2
断裂应力	230/160	MPa	ISO 527-1/-2
断裂伸长率	3/5	%	ISO 527-1/-2
弯曲模量	13000/-	MPa	ISO 178
弯曲强度	310/-	MPa	ISO 178
压缩强度	-/170	MPa	ISO 604
剪切强度	-/60	MPa	ASTM D 732
拉伸蠕变模量, 1h	*/9400	MPa	ISO 899-1
拉伸蠕变模量, 1000h	*/7300	MPa	ISO 899-1
简支梁无缺口冲击强度, +23°C	115/111	kJ/m <sup>2</sup>	ISO 179/1eU
简支梁无缺口冲击强度, -30°C	115/101	kJ/m <sup>2</sup>	ISO 179/1eU
简支梁缺口冲击强度, +23°C	20/25	kJ/m <sup>2</sup>	ISO 179/1eA
简支梁缺口冲击强度, -30°C	19/23	kJ/m <sup>2</sup>	ISO 179/1eA
悬臂梁缺口冲击强度, 23°C	18/24	kJ/m <sup>2</sup>	ISO 180/1A
悬臂梁缺口冲击强度, -30°C	15/-	kJ/m <sup>2</sup>	ISO 180/1A
球压痕硬度	250/-	MPa	ISO 2039-1
Poisson's ratio	0.33/0.34	-	

# Zytel® 73G45L NC010

## NYLON RESIN

### 热性能

	dry/cond.		
熔融温度, 10°C/min	221/*	°C	ISO 11357-1/-3
玻璃化转变温度, 10°C/min	55/15	°C	ISO 11357-1/-2
热变形温度, 1.80 MPa	213/*	°C	ISO 75-1/-2
热变形温度, 0.45 MPa	221/*	°C	ISO 75-1/-2
维卡软化温度, 50°C/h 50N	215/*	°C	ISO 306
线膨胀系数, 平行	16/*	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, 1.5mm	65	°C	UL 746B
相对温度指数, 冲击, 1.5mm	65	°C	UL 746B
相对温度指数, 强度, 1.5mm	65/*	°C	UL 746B

### 燃烧性能

	dry/cond.		
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
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
燃烧速率, 厚度: 1毫米	44	mm/min	ISO 3795 (FMVSS 302)

### 其它性能

	dry/cond.		
吸湿性, 2mm	1.7/*	%	类似ISO 62
吸水性, 2mm	4.9/*	%	类似ISO 62
密度	1510/-	kg/m <sup>3</sup>	ISO 1183

### 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 %
优良熔体温度	270 °C
注塑 熔体温度	260 °C
注塑 熔体温度	280 °C
螺杆大的切线速度	0.2 m/s
优良模具温度	100 °C
模具温度	70 °C
模具温度	120 °C
保压范围	50 - 100 MPa
保压时间	3 s/mm

### 典型数据

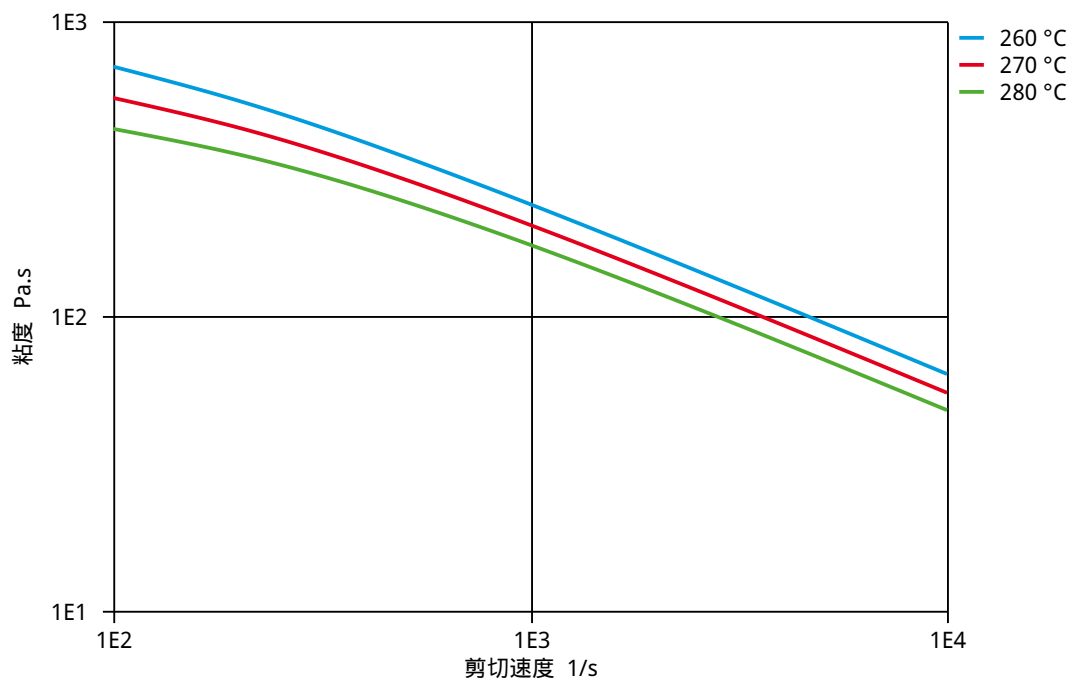
添加剂	脱模助剂
-----	------



# Zytel® 73G45L NC010

NYLON RESIN

粘度 - 剪切速度  
(measured on Zytel® 73G45 BK263)

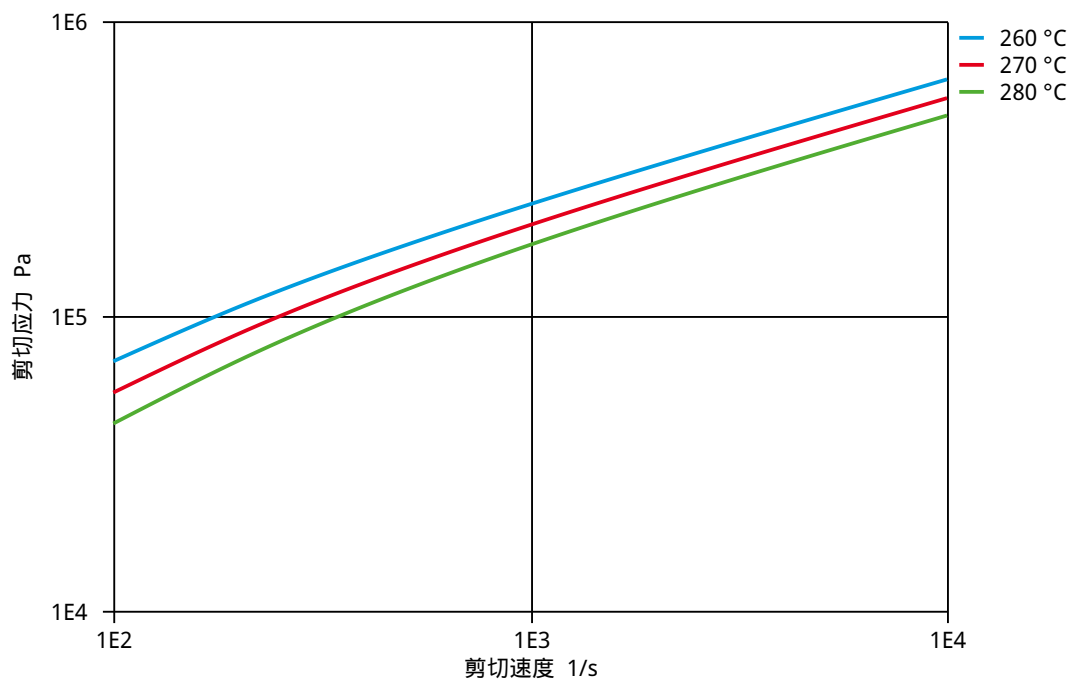




# Zytel® 73G45L NC010

NYLON RESIN

剪切应力 - 剪切速度  
(measured on Zytel® 73G45 BK263)

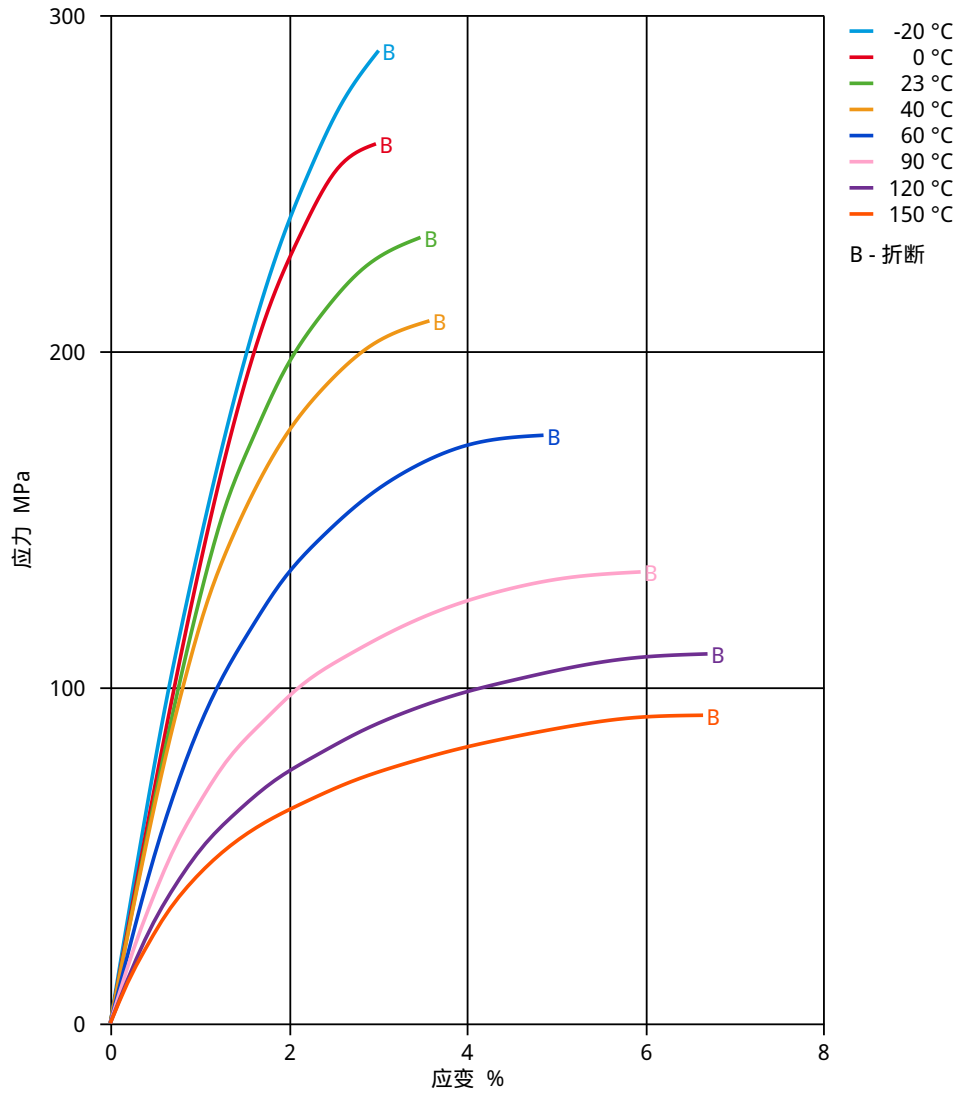




# Zytel® 73G45L NC010

NYLON RESIN

应力 - 应变. (dry)

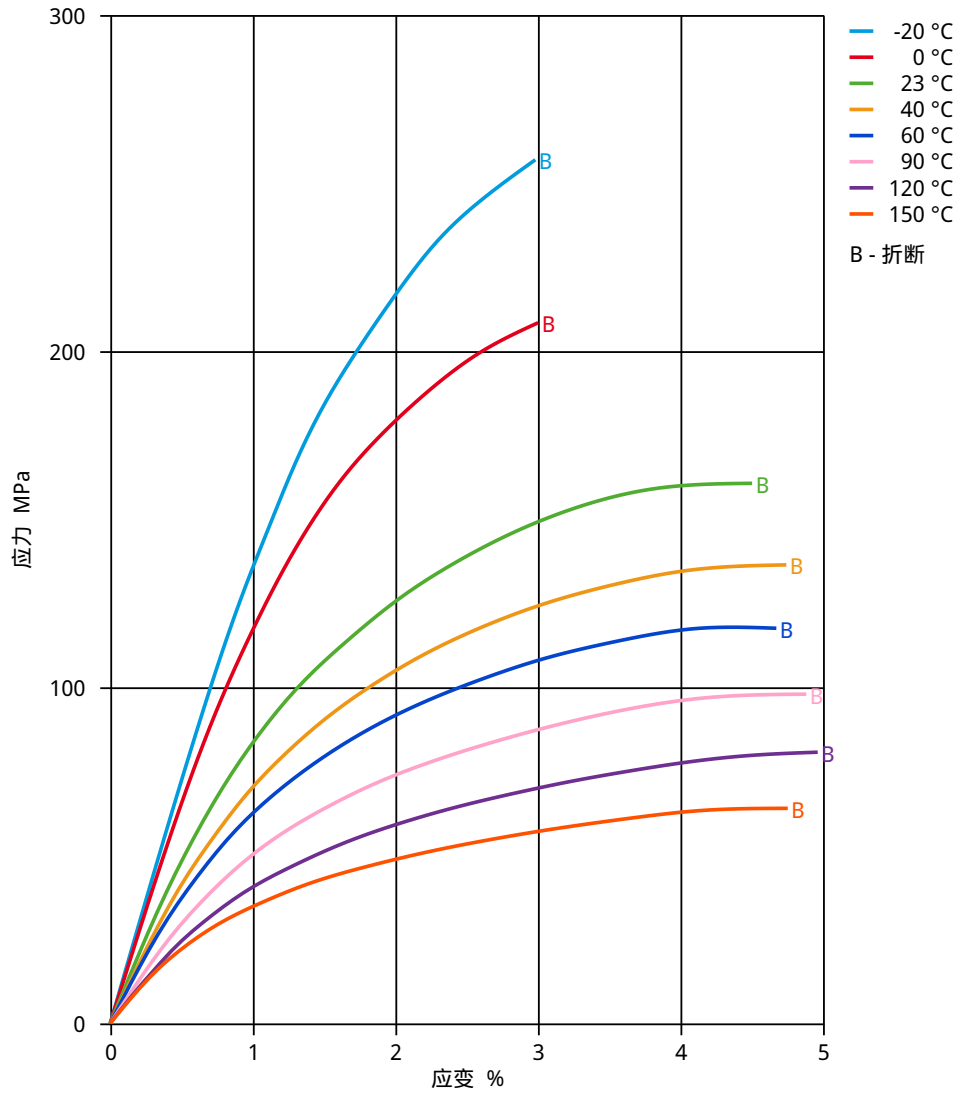




# Zytel® 73G45L NC010

NYLON RESIN

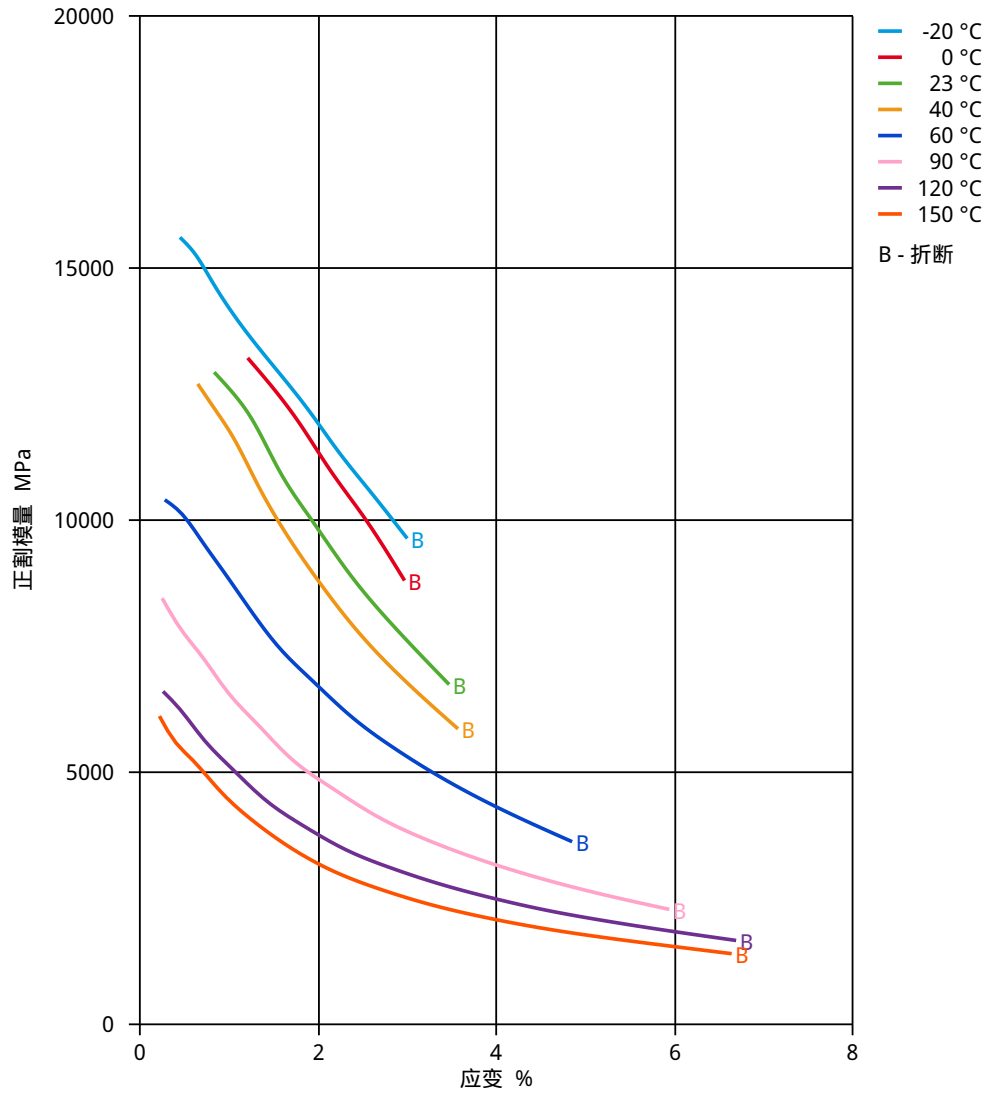
应力 - 应变. (cond.)



# Zytel® 73G45L NC010

NYLON RESIN

正割模量 - 应变. (dry)

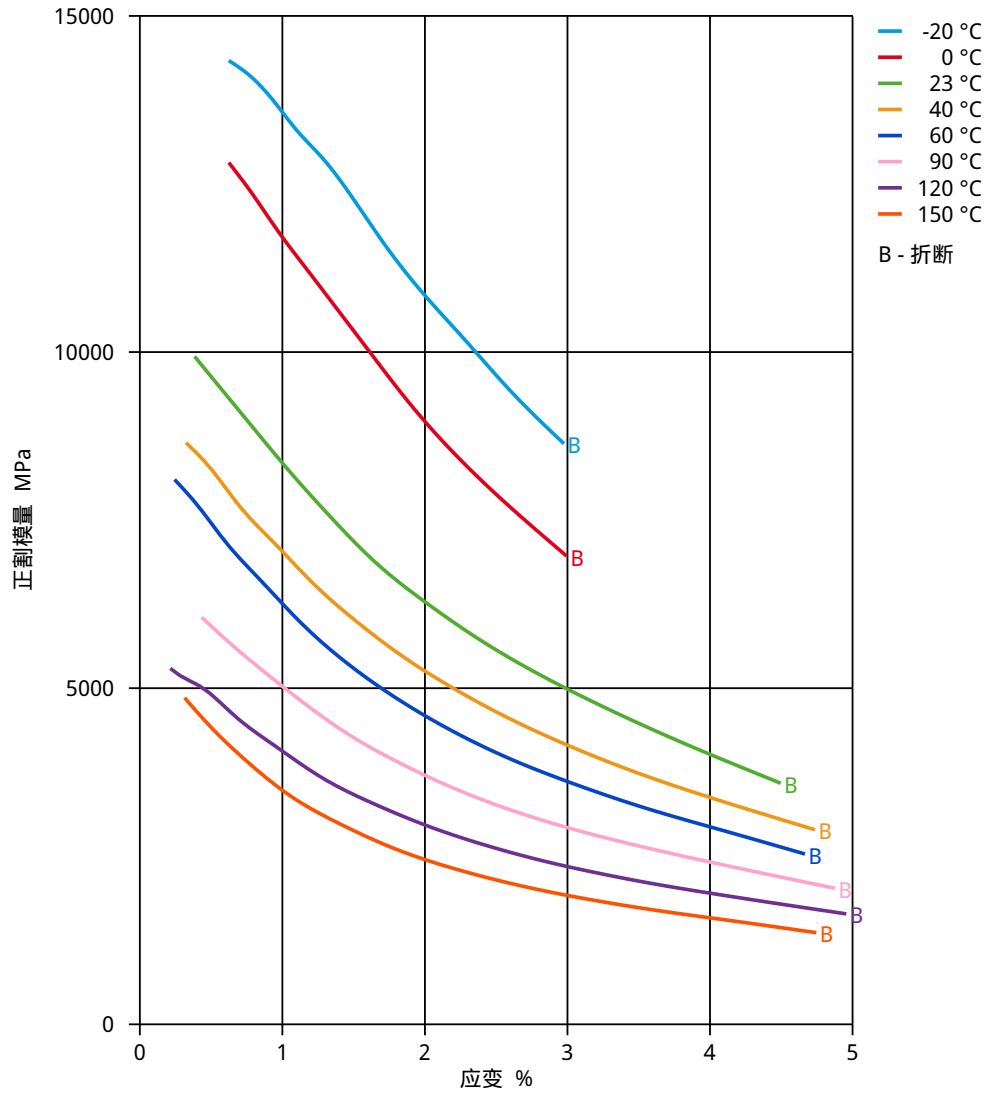




# Zytel® 73G45L NC010

NYLON RESIN

正割模量 - 应变. (cond.)



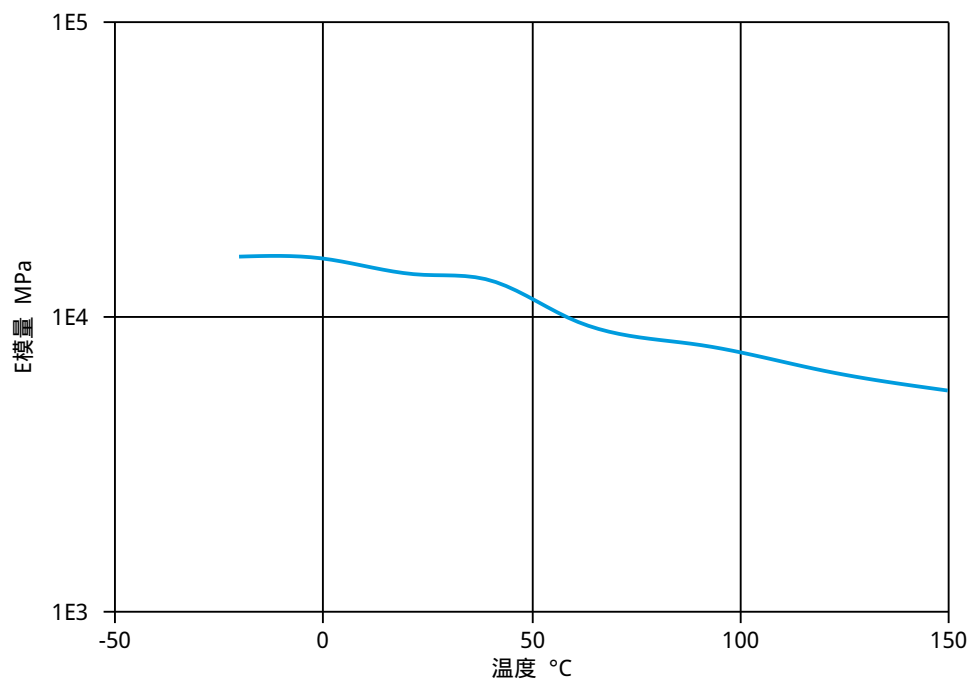




# Zytel® 73G45L NC010

NYLON RESIN

拉伸模量 - 温度 (dry)

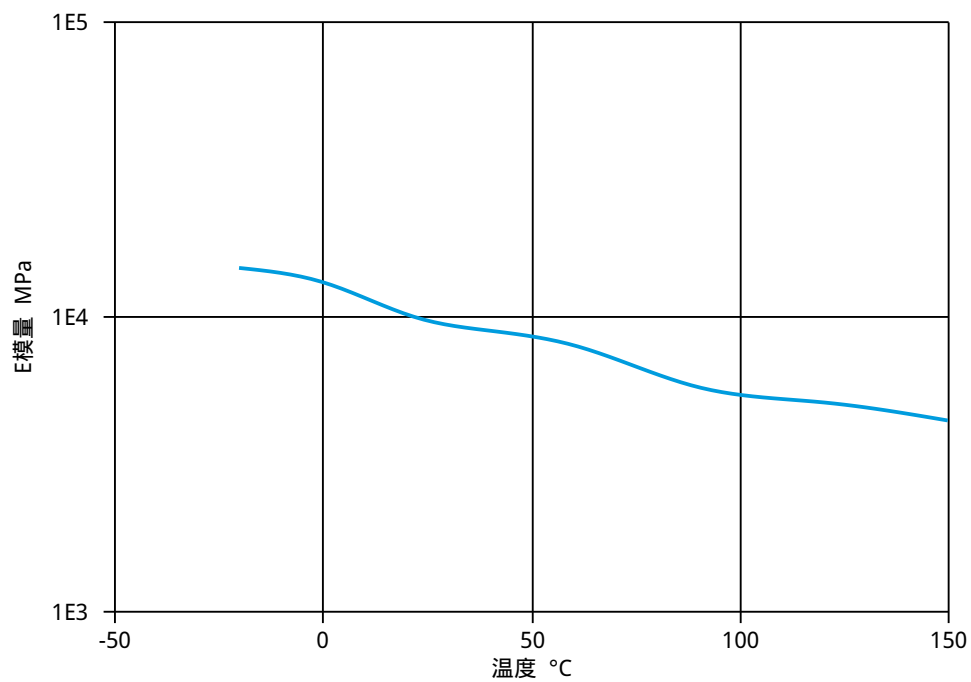




# Zytel® 73G45L NC010

NYLON RESIN

拉伸模量 - 温度 (cond.)



# Zytel® 73G45L NC010

## NYLON RESIN

### 耐化学性

#### 酸类

- ✓ 醋酸 (5g/100g), 23°C
- ✓ 柠檬酸溶液 (10g/100g), 23°C
- ✓ 乳酸 (10g/100g), 23°C
- ✗ 盐酸 (36g/100g), 23°C
- ✗ 硝酸 (40g/100g), 23°C
- ✗ 硫酸 (38g/100g), 23°C
- ✗ 硫酸 (5g/100g), 23°C
- ✗ 铬酸溶液 (40g/100g), 23°C

#### 碱类

- ✗ 氢氧化钠溶液 (35g/100g), 23°C
- ✓ 氢氧化钠溶液 (1g/100g), 23°C
- ✓ 氨水(氢氧化铵) (10g/100g), 23°C

#### 醇类

- ✓ 异丙醇, 23°C
- ✓ 甲醇, 23°C
- ✓ 乙醇, 23°C

#### 碳氢化合物

- ✓ n-乙烷, 23°C
- ✓ 甲苯, 23°C
- ✓ 异辛烷, 23°C

#### 酮类

- ✓ 丙酮, 23°C

#### 醚类

- ✓ (二)乙醚, 23°C

#### 矿物油

- ✓ SAE 10W40号多效润滑油, 23°C
- ✓ SAE 10W40号多效润滑油, 130°C
- ✓ SAE 89/90号变速箱润滑油, 130°C
- ✓ 绝缘油, 23°C

#### 标准燃油

- ✓ ISO 1817 燃油1号, 60°C
- ✓ ISO 1817 燃油2号, 60°C
- ✗ ISO 1817 燃油3号, 60°C
- ✗ ISO 1817 燃油4号, 60°C
- ✓ 不含酒精的标准燃油(优先使用C类ISO 1817 燃油), 23°C
- ✓ 含酒精的标准燃油(优先使用4号ISO 1817 燃油), 23°C
- ✓ 柴油(优先使用F类ISO 1817液体), 23°C
- ✗ 柴油(优先使用F类ISO 1817液体), 90°C
- ✗ 柴油(优先使用F类ISO 1817液体), >90°C

# Zytel® 73G45L NC010

## NYLON RESIN

### 盐溶液

- ✓ 氯化钠溶液(10g/100g), 23°C
- ✗ 次氯化钠溶液 (10g/100g), 23°C
- ✓ 碳酸钠溶液 (20g/100g), 23°C
- ✓ 碳酸钠溶液 (2g/100g), 23°C
- ✗ 氯化锌溶液 (50g/100g), 23°C

### 其它

- ✓ 乙酸乙酯, 23°C
- ✗ 过氧化氢, 23°C
- ✓ DOT4号刹车油, 130°C
- ✗ 乙二醇水溶液 (50g/100g), 108°C
- ✓ 1g/100g 基苯氧- 聚环氧乙烷乙烯水溶液, 23°C
- ✓ 油酸 (50g/100g) + 橄榄油 (50g/100g), 23°C
- ✓ 水, 23°C
- ✗ 去离子水, 90°C
- ✗ 酚溶液(5g/100g), 23°C

### 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).

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.