



Zytel® ST7301 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® ST7301 NC010是一种超韧 尼龙6

总说明

树脂鉴别	PA6-HI	ISO 1043
制品标识码	>PA6-HI<	ISO 11469
ISO名称	ISO 16396-PA6-I,,M1G1HNR,S14-020	

流变性能

	dry/cond.		
粘数.	160/* ^[1]	cm ³ /g	ISO 307, 1157, 1628
模塑收缩率, 平行	1.0/-	%	ISO 294-4, 2577
模塑收缩率, 垂直	1.0/-	%	ISO 294-4, 2577
模塑收缩率	0.1/*	%	ISO 294-4
模塑收缩率	0.1/*	%	ISO 294-4

[1]: Sulfuric acid 96%

机械性能

	dry/cond.		
拉伸模量	1800/550	MPa	ISO 527-1/-2
屈服应力	48/29	MPa	ISO 527-1/-2
屈服伸长率	4/30	%	ISO 527-1/-2
名义断裂伸长率	>50/>50	%	ISO 527-1/-2
弯曲模量	1700/550	MPa	ISO 178
弯曲应力 (3.5%应变)	53/32	MPa	ISO 178
拉伸蠕变模量, 1000h	*/320	MPa	ISO 899-1
简支梁无缺口冲击强度, +23°C	N/N	kJ/m ²	ISO 179/1eU
简支梁无缺口冲击强度, -30°C	N/N	kJ/m ²	ISO 179/1eU
简支梁缺口冲击强度, +23°C	80/120	kJ/m ²	ISO 179/1eA
简支梁缺口冲击强度, -30°C	17/18	kJ/m ²	ISO 179/1eA
简支梁缺口冲击强度, -40°C	18/17	kJ/m ²	ISO 179/1eA
悬臂梁缺口冲击强度, 23°C	60/95	kJ/m ²	ISO 180/1A
悬臂梁缺口冲击强度, -30°C	14/15	kJ/m ²	ISO 180/1A
悬臂梁缺口冲击强度, -40°C	15/13	kJ/m ²	ISO 180/1A
球压痕硬度	95/.[^{DS}]	MPa	ISO 2039-1
Poisson's ratio	0.41/0.47	-	

[DS]: Derived from similar grade

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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	60/15	°C	ISO 11357-1/-2
热变形温度, 1.80 MPa	51/*	°C	ISO 75-1/-2
热变形温度, 0.45 MPa	95/*	°C	ISO 75-1/-2
熔体	0.15	W/(m K)	
熔体的比热	2600	J/(kg K)	

燃烧性能

FMVSS Class	B -	ISO 3795 (FMVSS 302)
燃烧速率, 厚度: 1毫米	<80 mm/min	ISO 3795 (FMVSS 302)

其它性能

	dry/cond.		
吸湿性, 2mm	2.7/*	%	类似ISO 62
密度	1060/-	kg/m ³	ISO 1183
熔体密度	960	kg/m ³	

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	0.3 m/s
优良模具温度	70 °C
模具温度	50 °C
模具温度	90 °C
保压范围	50 - 100 MPa
保压时间	4 s/mm

薄膜挤出成型

干燥温度	80 °C
干燥时间, 除湿干燥机	3 - 4 h
加工前水分含量	≤ 0.06 %
好的熔体温度	240 °C
熔体温度范围	235 - 250 °C



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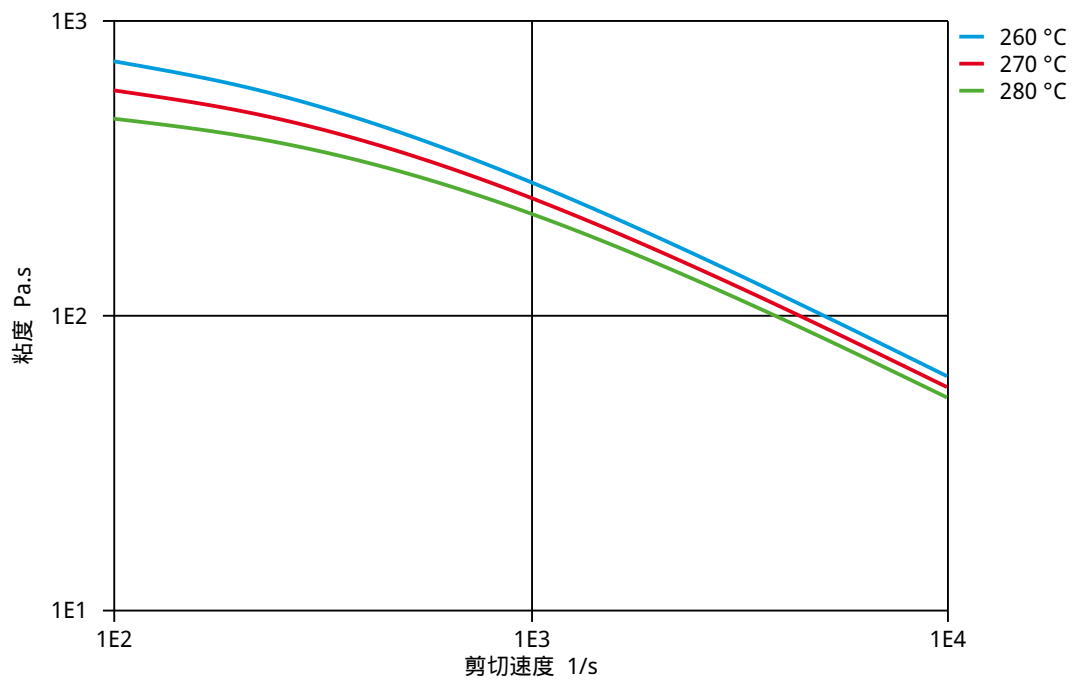
NYLON RESIN

典型数据

添加剂

脱模助剂

粘度 - 剪切速度

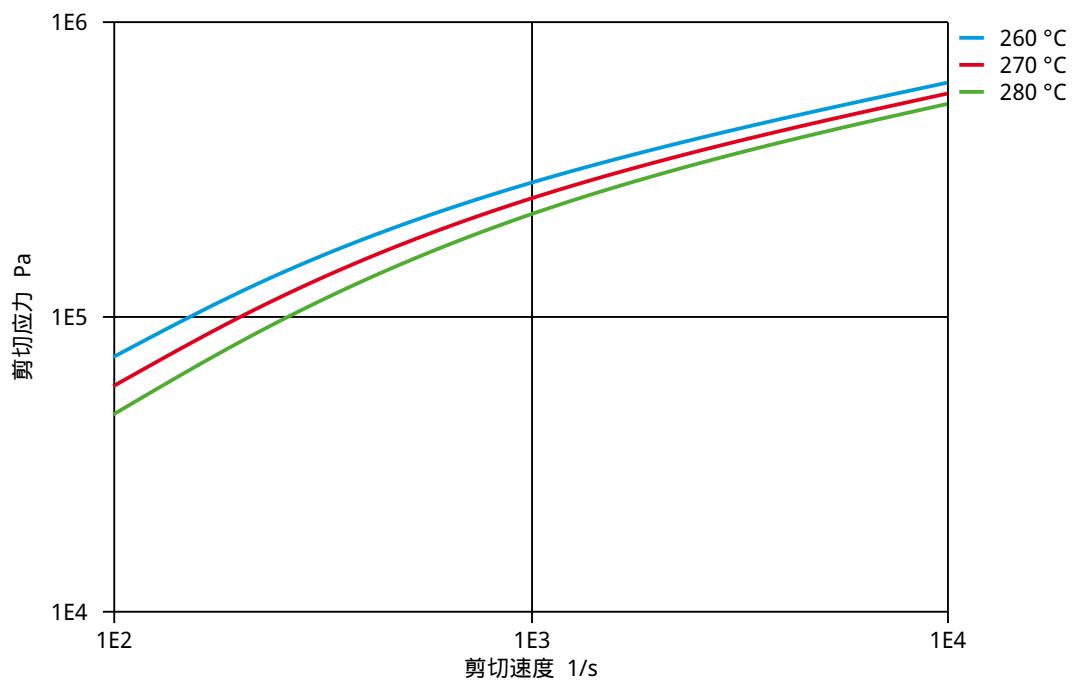




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剪切应力 - 剪切速度

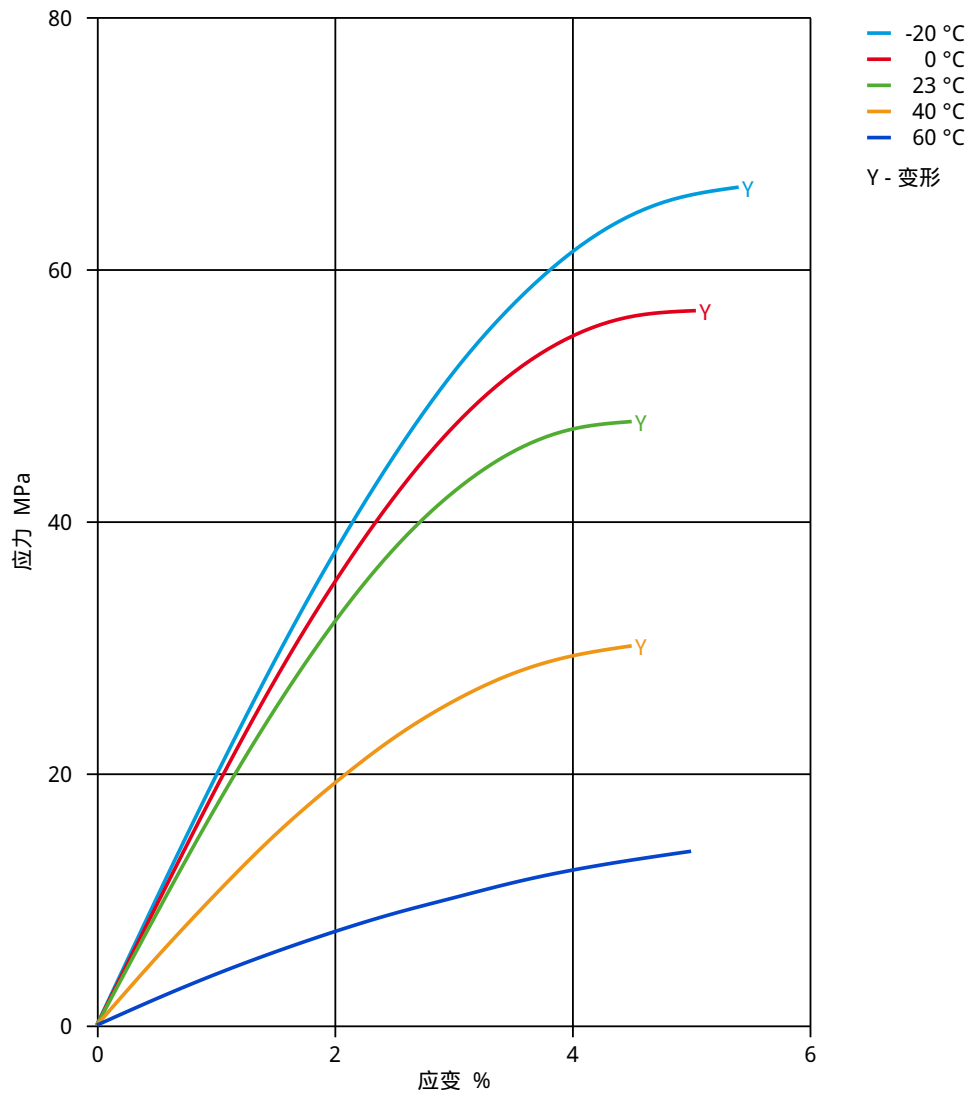




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应力 - 应变. (dry)

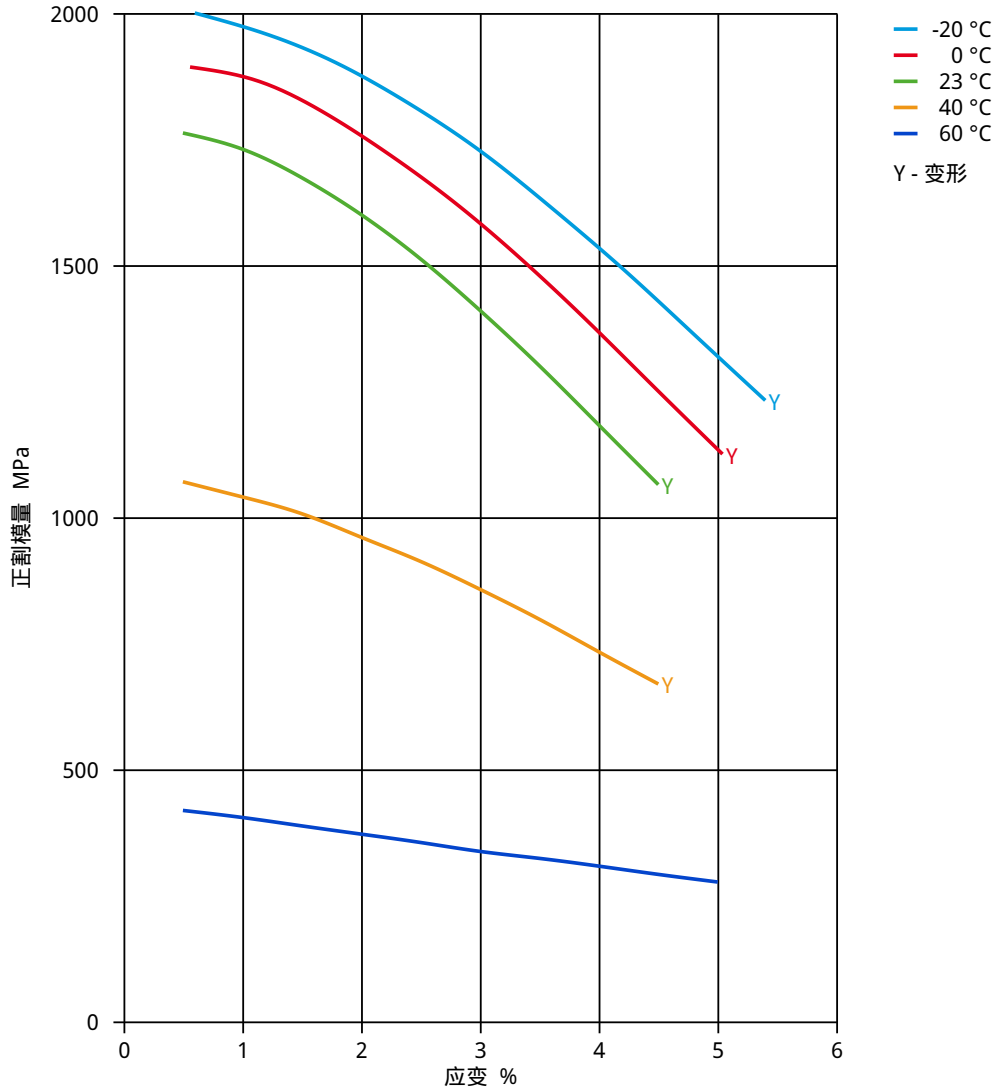




Zytel® ST7301 NC010

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正割模量 - 应变. (dry)

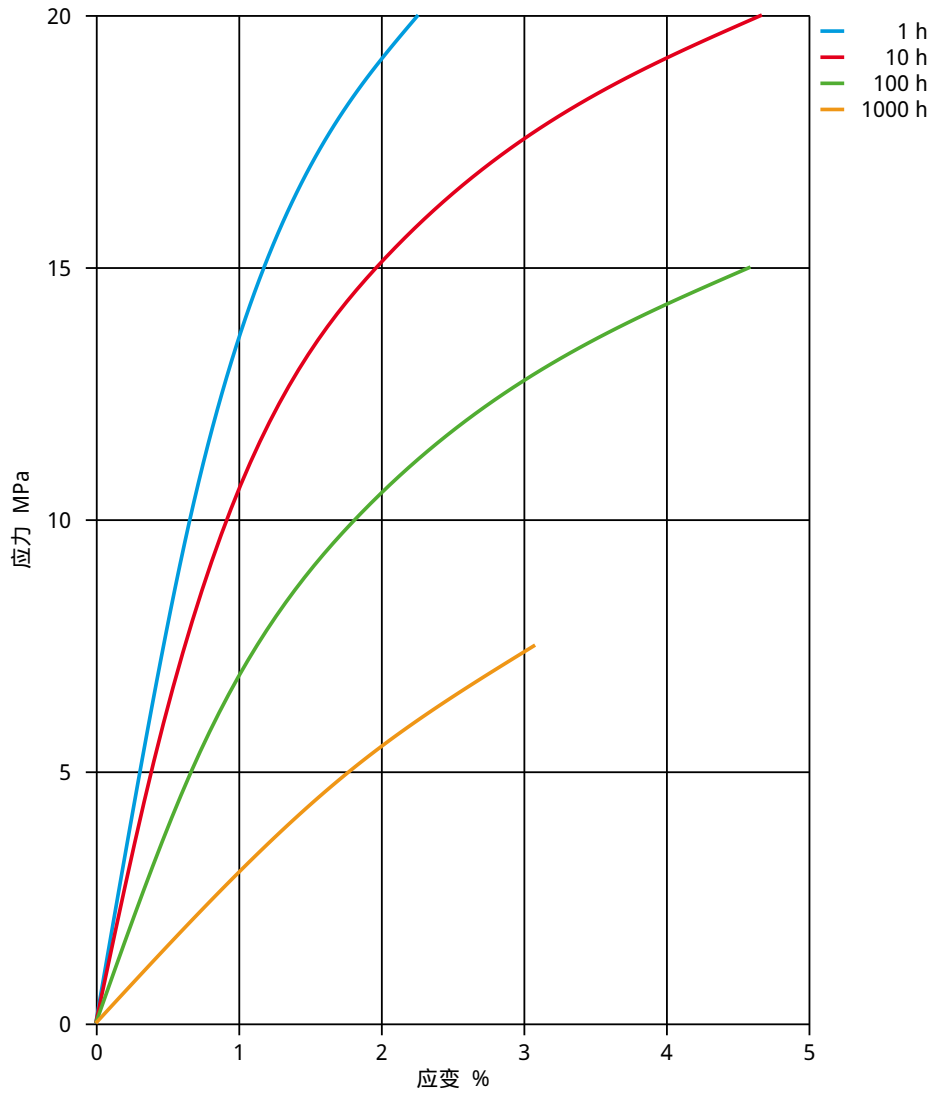




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NYLON RESIN

应力 - 应变(等时的) 23°C (cond.)

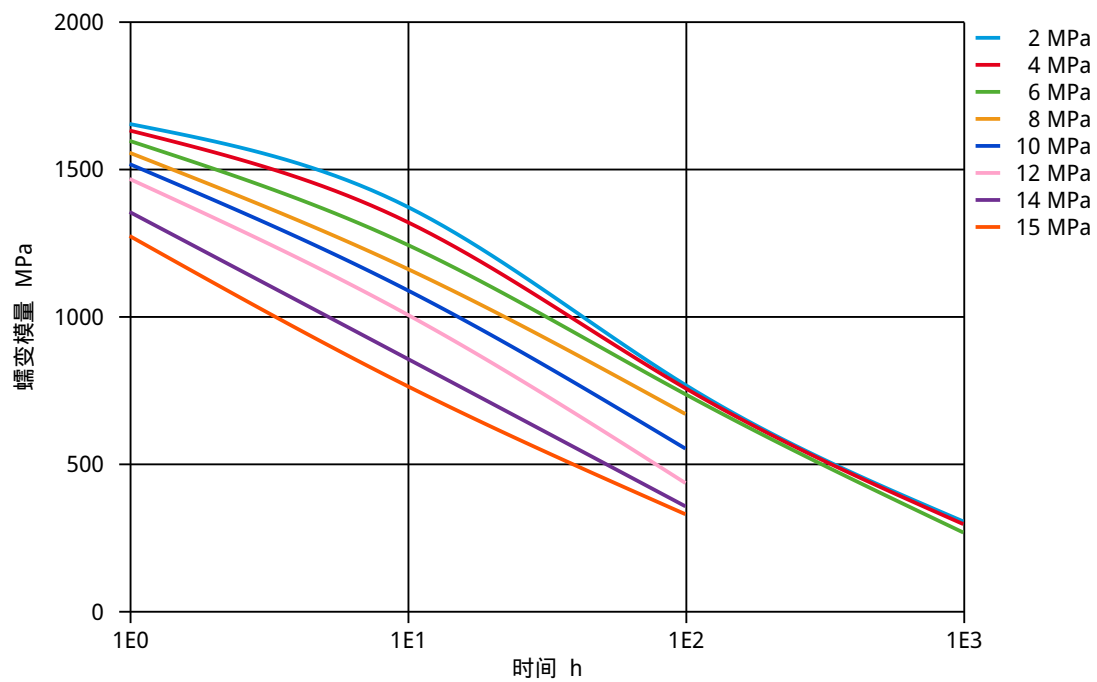




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NYLON RESIN

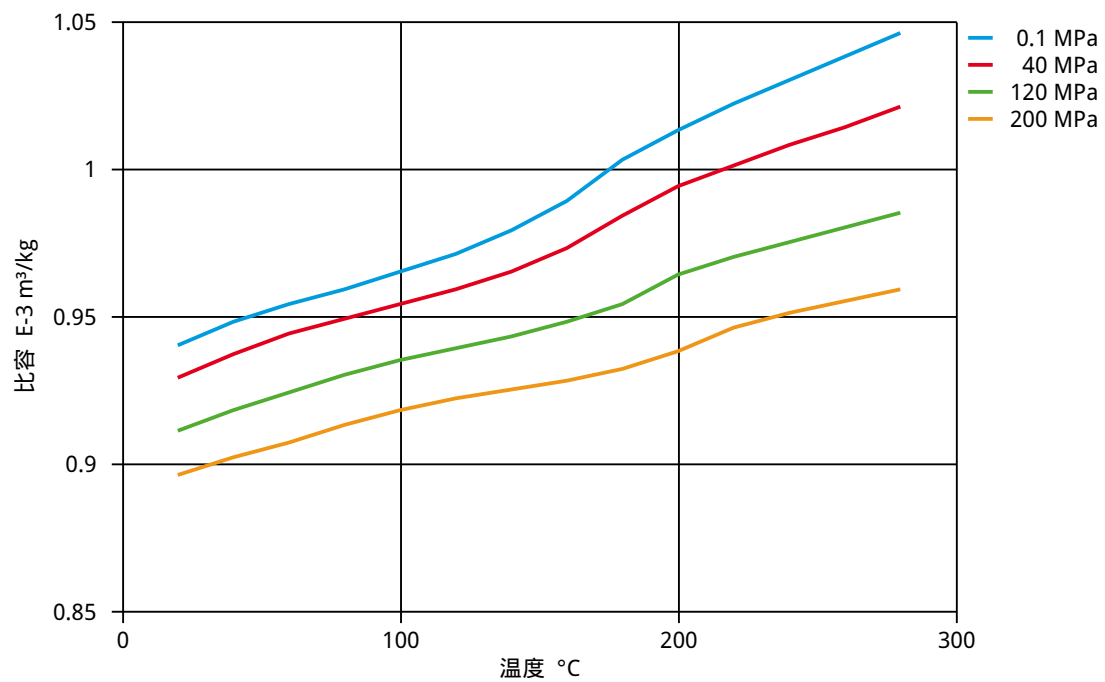
蠕变模量 - 时间. 23°C (cond.)



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比容 - 温度(pvT)

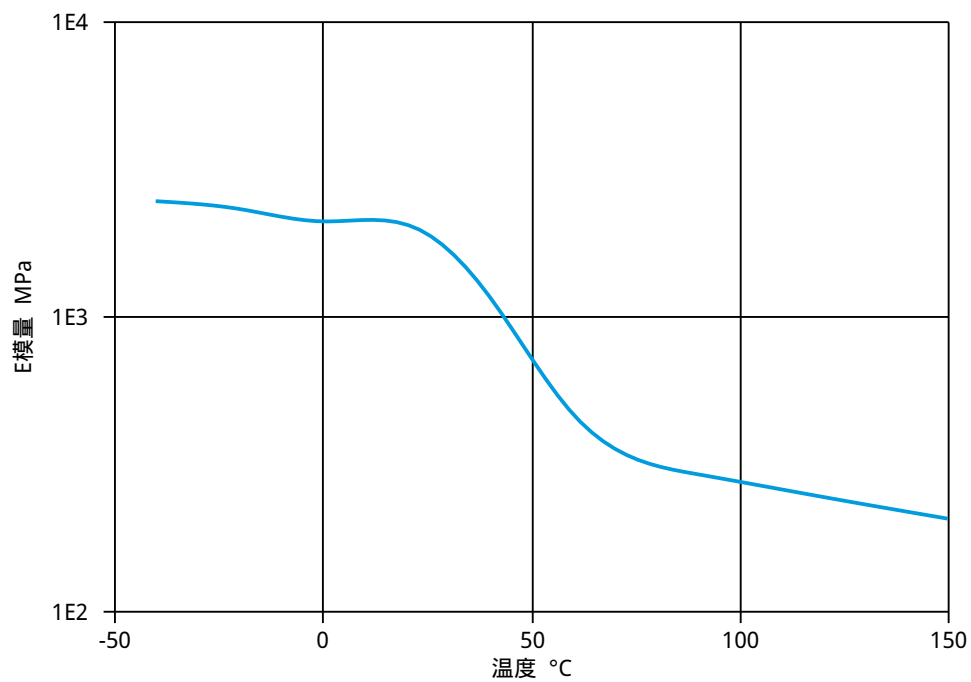




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拉伸模量 - 温度 (dry)
(measured on Zytel® ST7301 BK356)

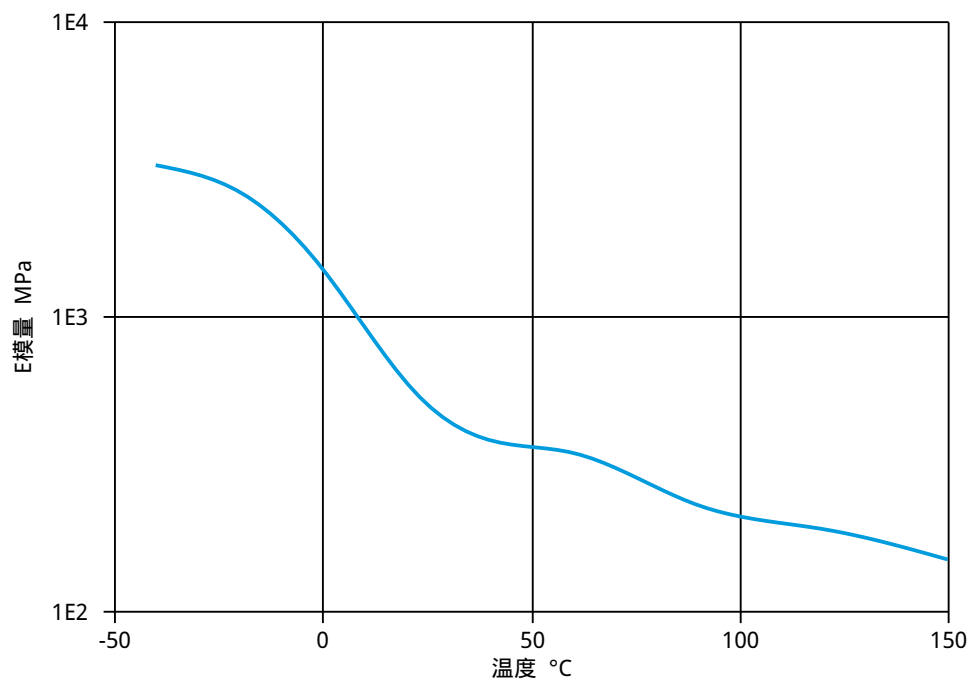




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NYLON RESIN

拉伸模量 - 温度 (cond.)
(measured on Zytel® ST7301 BK356)



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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

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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).

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