

DuPont™ Zytel® HTN51G35HSL NC010

HIGH PERFORMANCE POLYAMIDE RESIN

产品

Zytel® HTN51G35HSL NC010是一种35% 玻纤增强, 高温尼龙, 高性能聚酰胺

总说明	数值	单位	测试标准
树脂鉴别	PA6T/XT-GF35	-	ISO 1043
产品标识码	PA6T/XT-GF35	-	ISO 11469
产品标识码	>PPA-GF35<	-	SAE J1344
流变性能	干态/调节后	单位	测试标准
模塑收缩率, 平行	0.2 / -	%	ISO 294-4, 2577
模塑收缩率, 垂直	0.6 / -	%	ISO 294-4, 2577
机械性能	干态/调节后	单位	测试标准
拉伸模量	12000 / 12000	MPa	ISO 527-1/-2
断裂应力	210 / 210	MPa	ISO 527-1/-2
断裂伸长率	2.4 / 2.2	%	ISO 527-1/-2
弯曲模量	10300 / 10300	MPa	ISO 178
弯曲强度	300 / 290	MPa	ISO 178
拉伸蠕变模量			ISO 899-1
1h	* / 11000	MPa	
1000h	* / 9500	MPa	
无缺口简支梁冲击强度			ISO 179/1eU
+23°C	70 / 55	kJ/m ²	
-30°C	60 / 50	kJ/m ²	
简支梁缺口冲击强度			ISO 179/1eA
+23°C	11 / 11	kJ/m ²	
-30°C	10 / 10	kJ/m ²	
-40°C	11 / -	kJ/m ²	
悬臂梁缺口冲击强度			ISO 180/1A
23°C	11 / 11	kJ/m ²	
-30°C	10 / 10	kJ/m ²	
无缺口悬臂梁冲击, -30°C	50 / 40	kJ/m ²	ISO 180/1U
洛氏硬度	108 / -	-	ISO 2039-2
洛氏硬度, Rockwell	124 / -	-	ISO 2039-2
滑动摩擦系数, 1h, 钢	- / 0.35	-	ASTM 1894
热性能	干态/调节后	单位	测试标准
熔融温度	300 / *	°C	ISO 11357-1/-3
热变形温度			ISO 75-1/-2
1.80 MPa	264 / *	°C	
0.45 MPa	284 / *	°C	
维卡软化温度, 50°C/h 50N	290 / *	°C	ISO 306
线膨胀系数, 平行	18 / *	E-6/K	ISO 11359-1/-2
线膨胀系数			ISO 11359-1/-2
垂直	55 / *	E-6/K	
垂直, -40-23°C	55 / *	E-6/K	
平行, -40-23°C	18 / *	E-6/K	
熔体	0.25	W/(m K)	-
熔体的比热	1860	J/(kg K)	-
相对温度指数, 电气性能			UL 746B
0.75mm	150 / *	°C	
1.5mm	150 / *	°C	
3mm	150	°C	

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相对温度指数, 冲击性能			UL 746B
0.75mm	125	°C	
1.5mm	125 / *	°C	
3mm	130	°C	
相对温度指数, 强度			UL 746B
0.75mm	130	°C	
1.5mm	140 / *	°C	
3mm	150	°C	
燃烧性能	干态/调节后	单位	测试标准
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	0.85 / *	mm	IEC 60695-11-10
UL注册	yes / *	-	UL 94
燃烧性 - 氧指数	24 / *	%	ISO 4589-1/-2
灼热丝可燃指数			IEC 60695-2-12
0.75mm	750 / -	°C	
1.5mm	750 / -	°C	
3mm	960 / -	°C	
灼热丝起燃温度			IEC 60695-2-13
1.5mm	775 / -	°C	
3mm	800 / -	°C	
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	干态/调节后	单位	测试标准
相对介电常数.			IEC 62631-2-1
100Hz	4 / -	-	
1MHz	4 / -	-	
介质损耗因子, 1MHz	120 / -	E-4	IEC 62631-2-1
体积电阻率	>1E13 / 1E13	Ohm*m	IEC 62631-3-1
表面电阻率	* / 1E14	Ohm	IEC 62631-3-2
介电强度	36 / 36	kV/mm	IEC 60243-1
相对漏电起痕指数	600 / 600	-	IEC 60112
其它性能	干态/调节后	单位	测试标准
吸水性, 2mm	4.5 / *	%	类似ISO 62
密度	1470 / -	kg/m ³	ISO 1183
熔体密度	1230	kg/m ³	-
VDA性能	数值	单位	测试标准
气味测试	4	class	VDA 270
注塑	数值	单位	测试标准
建议干燥	是	-	-
干燥温度	≥ 100	°C	-
干燥时间, 除湿干燥机	6 - 8	h	-
加工前水分含量	≤ 0.1	%	-
最优熔体温度	325	°C	-
注塑 熔体温度	320	°C	-
注塑 熔体温度	330	°C	-
最优模具温度	150	°C	-
模具温度	140 ⁽¹⁾	°C	-
模具温度	180	°C	-

1: Higher temperature needed for thinner sections.

典型数据

加工方法	• 注塑
供货形式	• 粒料

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添加剂	• 润滑剂	• 脱模助剂	
特殊性能	• 热稳定、耐热的		
地区供应	• 北美 • 欧洲	• 亚太 • 中南美洲	• 中东/非洲 • Global

成型

注塑

During molding, use proper protective equipment and adequate ventilation. Avoid exposure to fumes and limit the hold up time and temperature of the resin in the machine. Purge degraded resin carefully with HDPE.

When lower mold temperatures are used, the initial warpage and shrinkage may be lower, but the surface appearance and chemical resistance may be reduced, and the dimensional change may be greater when parts are subsequently heated.

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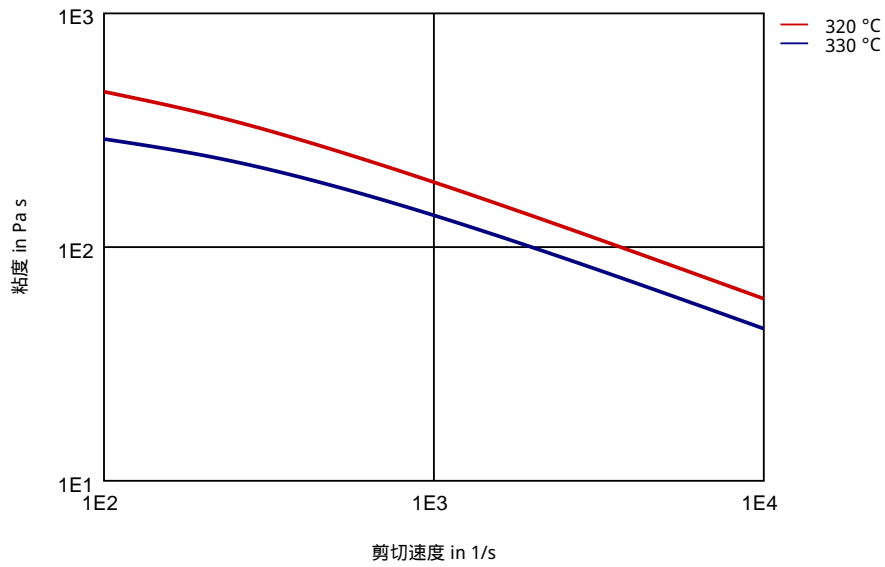


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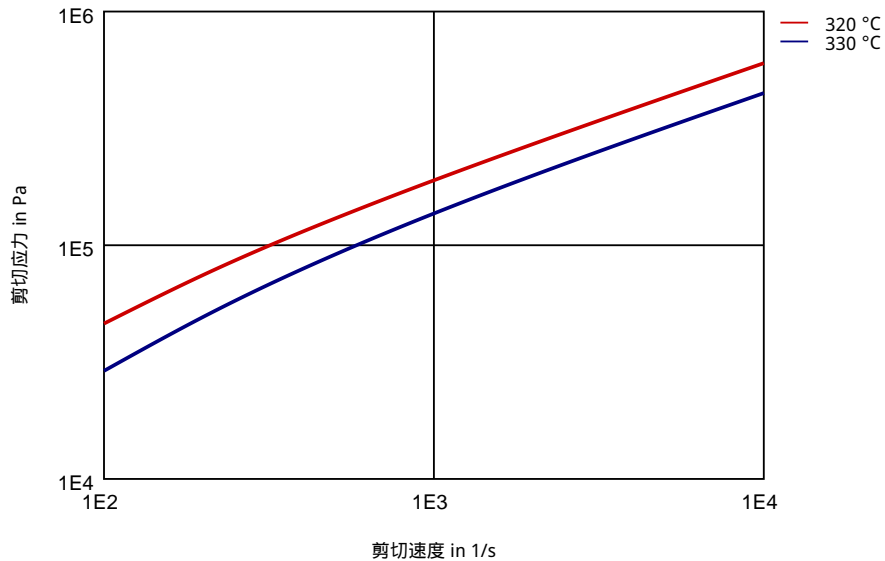
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图表

粘度 - 剪切速度



剪切应力 - 剪切速度



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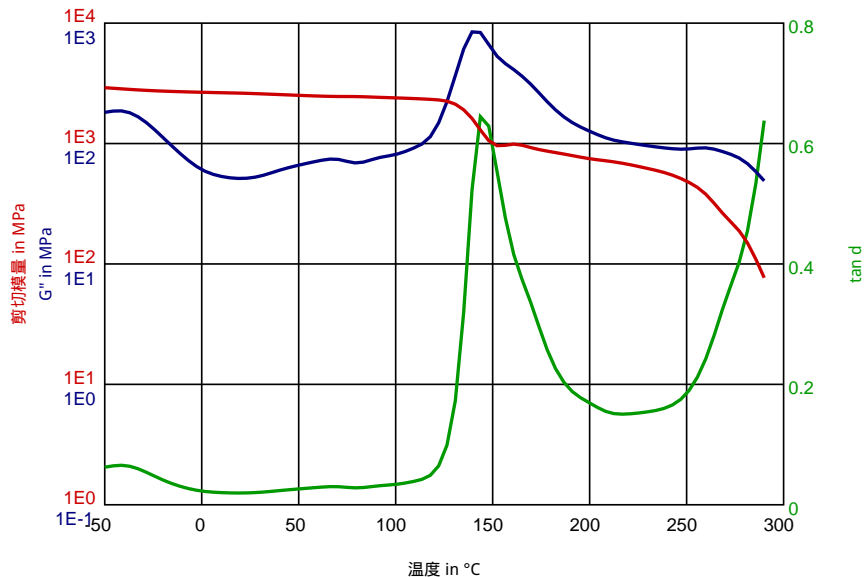
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动态剪切模量 - 温度 (干)



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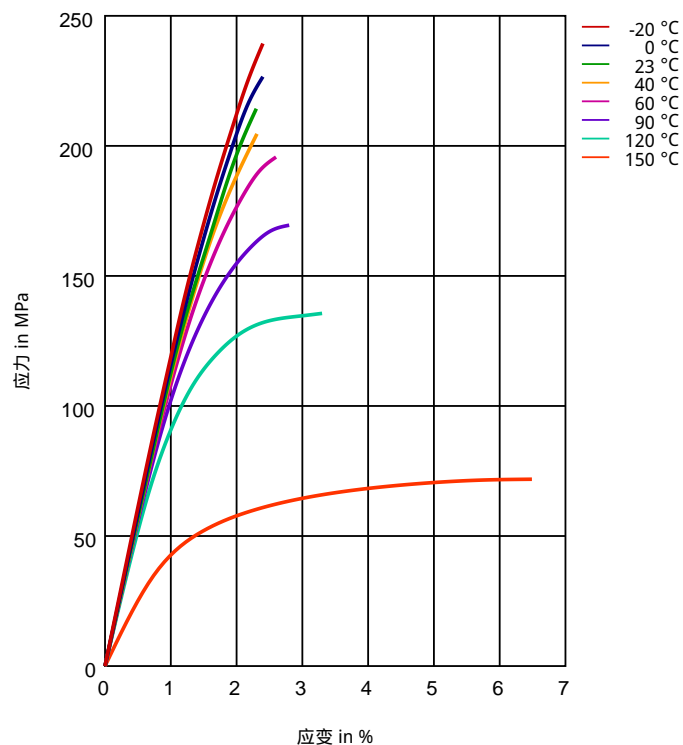
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应力 - 应变. (干)



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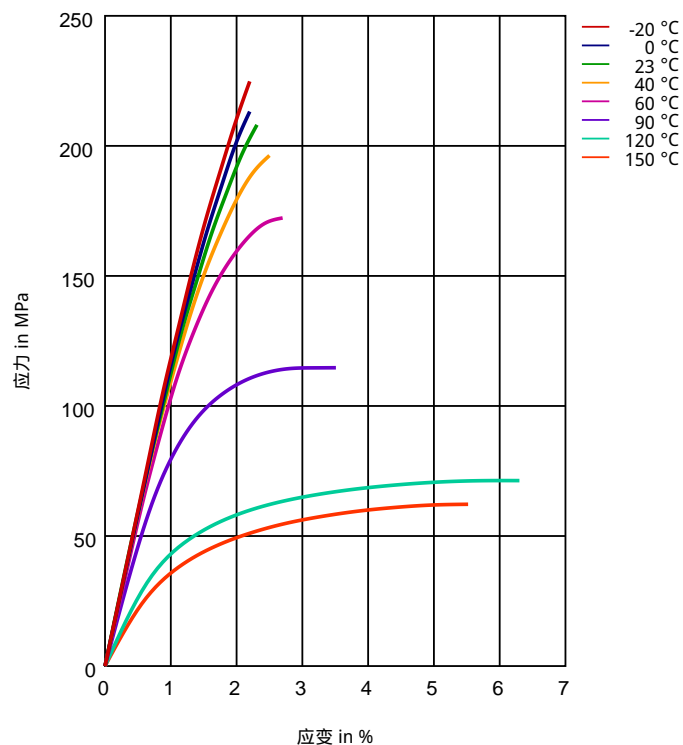
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应力 - 应变. (湿)



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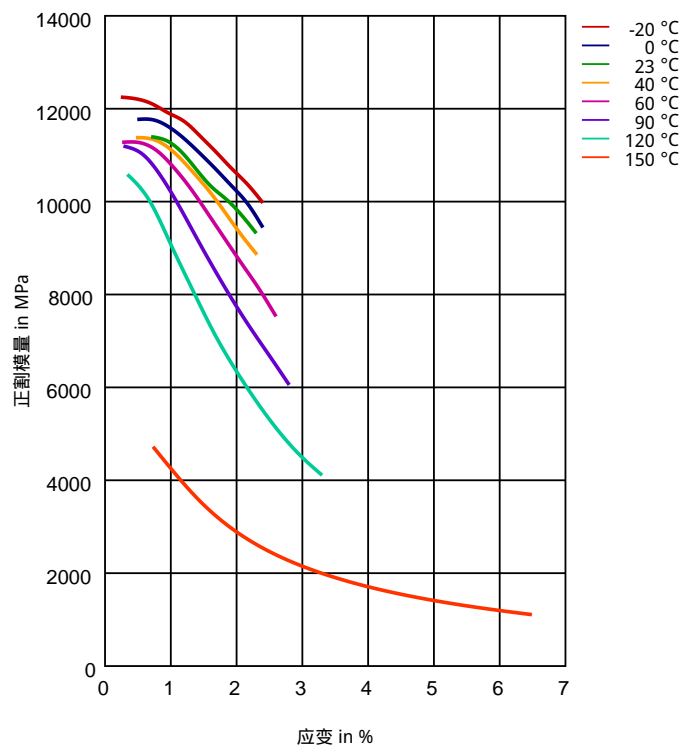
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正割模量 - 应变. (干)



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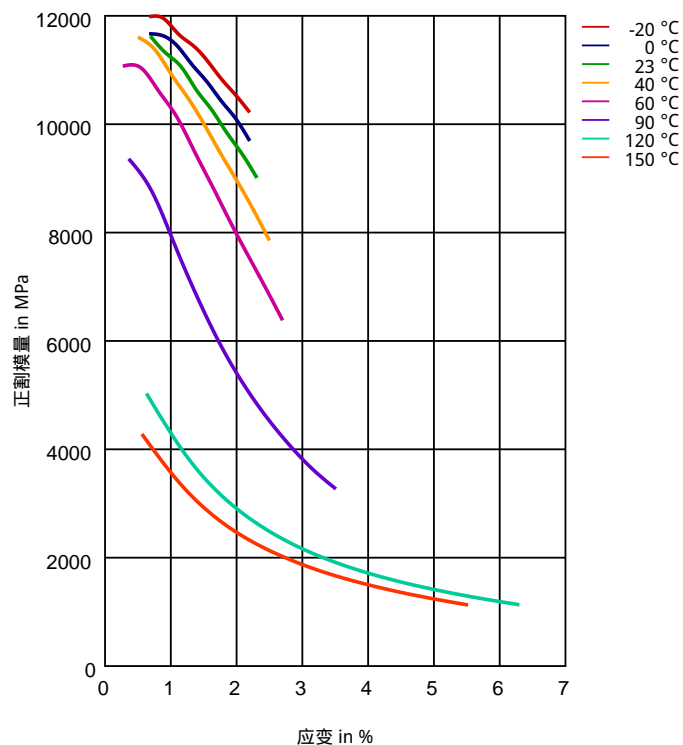
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正割模量 - 应变. (湿)



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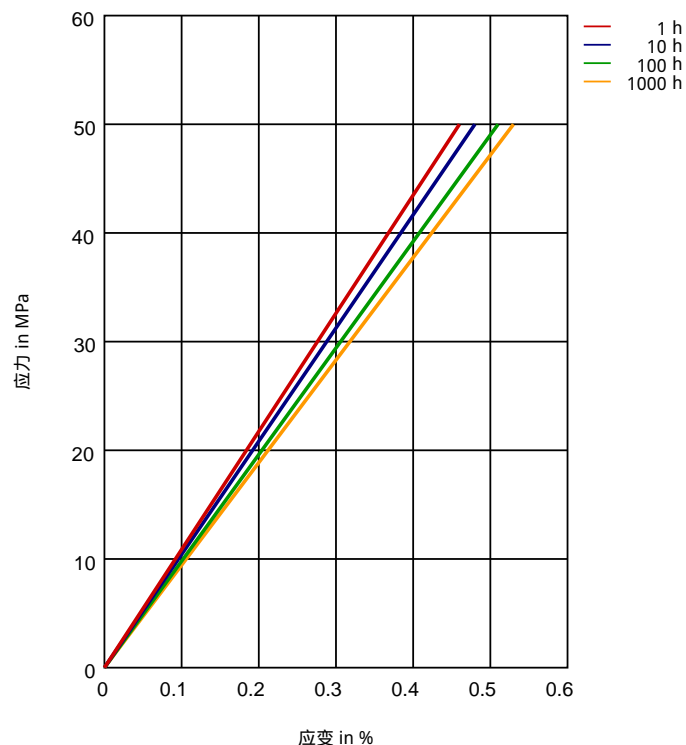
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HIGH PERFORMANCE POLYAMIDE RESIN

应力 - 应变(等时的) 23°C(湿)



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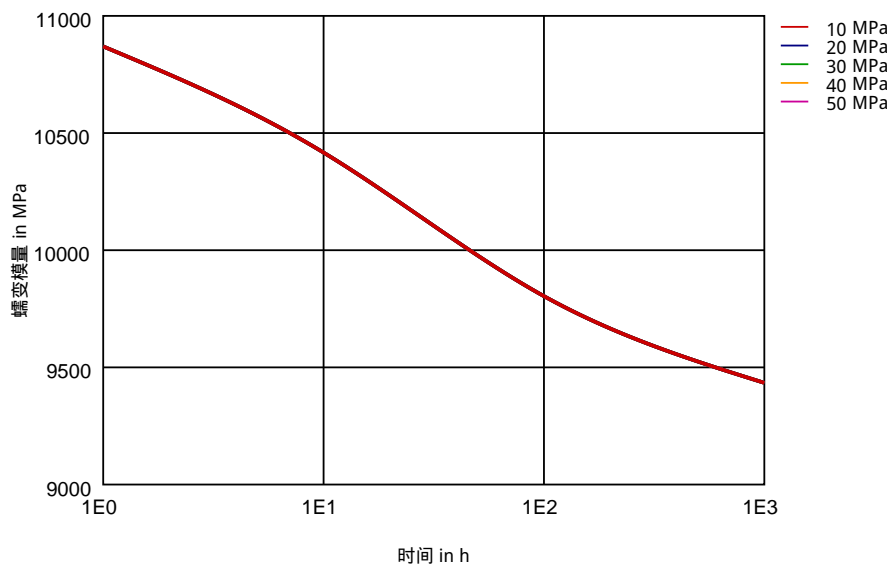
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蠕变模量 - 时间. 23°C(湿)



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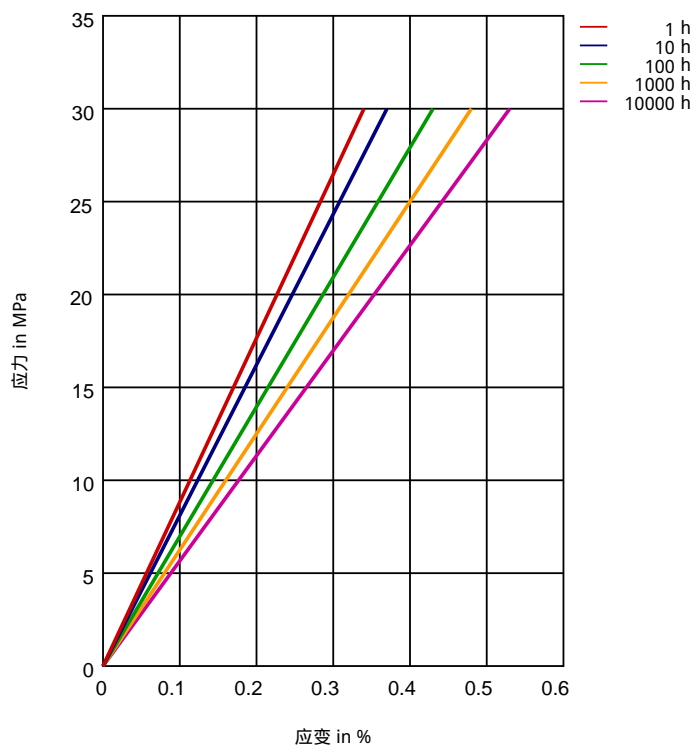
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HIGH PERFORMANCE POLYAMIDE RESIN

应力 - 应变(等时的) 100°C(干)



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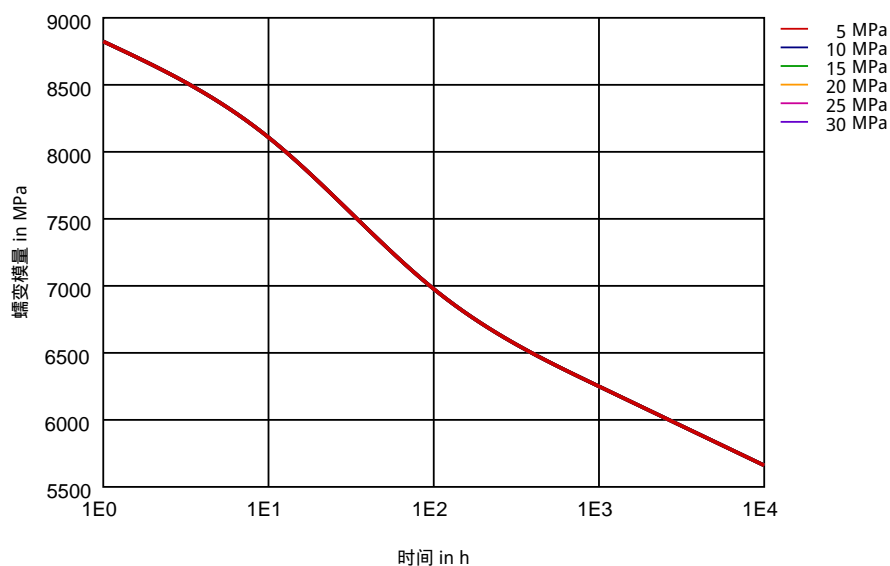
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蠕变模量 - 时间, 100°C(干)



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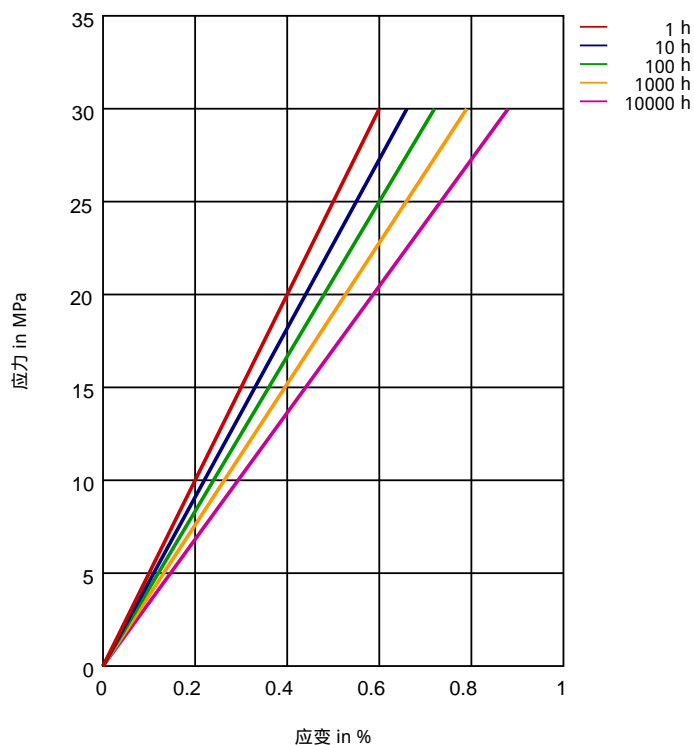


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HIGH PERFORMANCE POLYAMIDE RESIN

应力 - 应变(等时的) 150°C(干)



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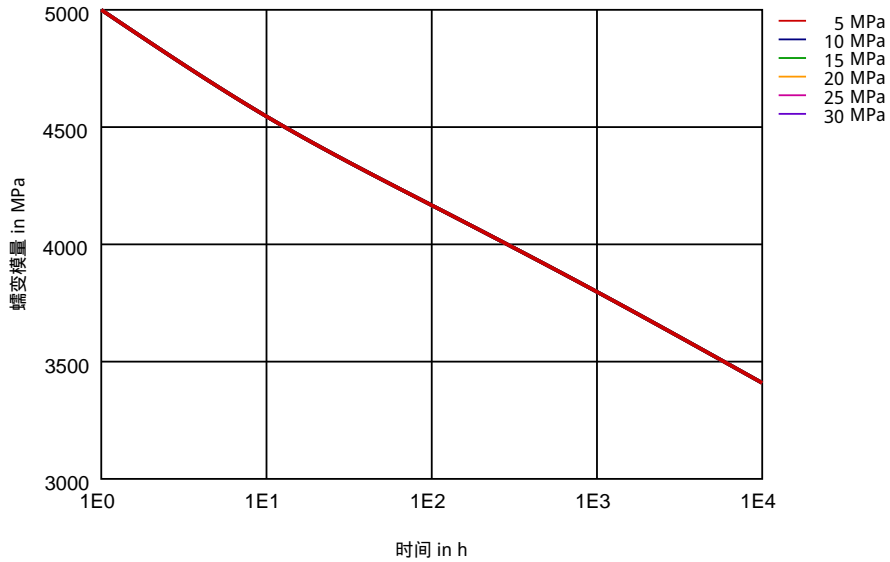
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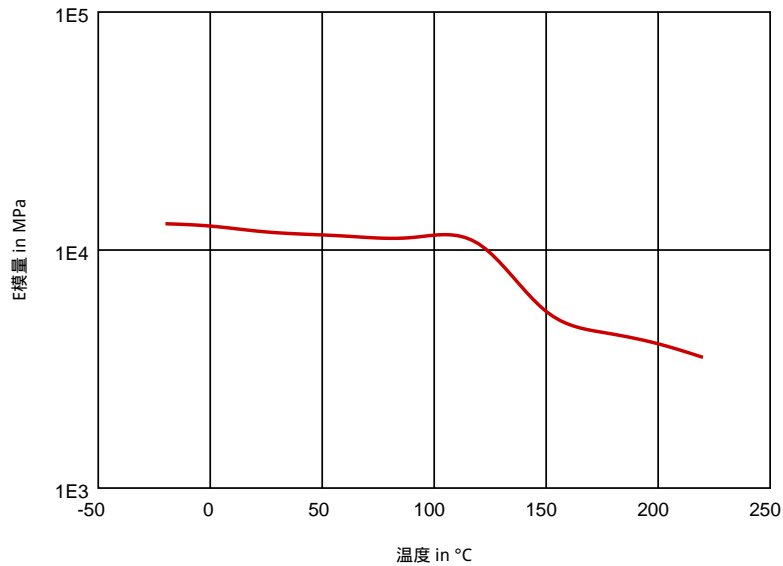
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蠕变模量 - 时间, 150°C(干)



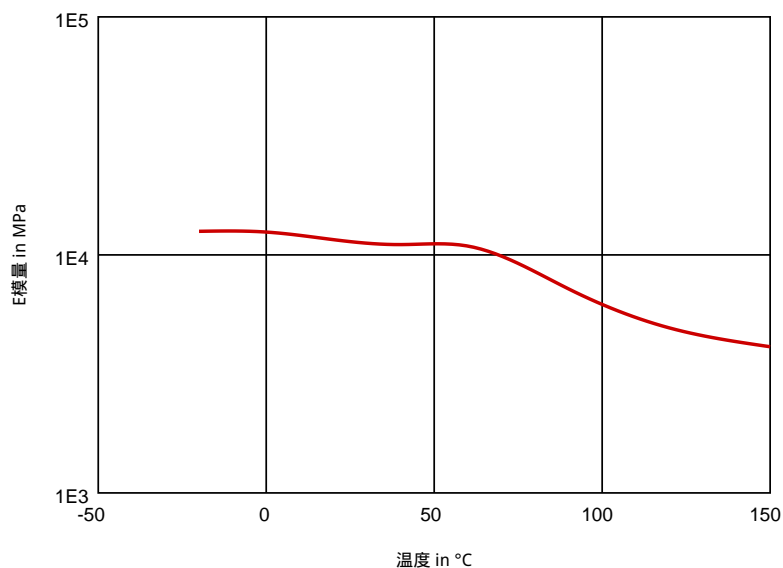
拉伸模量 - 温度(干)



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拉伸模量 - 温度 (湿)



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HIGH PERFORMANCE POLYAMIDE RESIN

耐化学性

其它

- ✓ 乙二醇水溶液 (50g/100g) (108°C)
- ✓ 水 (23°C)
- ✓ 去离子水 (90°C)
- ✓ 冷却Glysantin G48 , 1:1水环境 (125°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).

- X 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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