



Zytel® ST801A NC010A

NYLON RESIN

Zytel® ST801A NC010A是一种未增强, 超韧, 有一定耐UV性能的尼龙66

总说明

树脂鉴别	PA66-HI	ISO 1043
制品标识码	>PA66-HI<	ISO 11469
ISO名称	ISO 16396-PA66-I,,M1G1NR,S12-020	

流变性能

	dry/cond.		
粘数.	130/*	cm ³ /g	ISO 307, 1157, 1628
模塑收缩率, 平行	1.8/-	%	ISO 294-4, 2577
模塑收缩率, 垂直	1.4/-	%	ISO 294-4, 2577

机械性能

	dry/cond.		
拉伸模量	2000/900	MPa	ISO 527-1/-2
50%伸长率时的应力S	49/44	MPa	ISO 527-1/-2
断裂伸长率	>50/>50	%	ISO 527-1/-2
弯曲模量	1800/700	MPa	ISO 178
拉伸蠕变模量, 1h	*/800	MPa	ISO 899-1
拉伸蠕变模量, 1000h	*/700	MPa	ISO 899-1
简支梁无缺口冲击强度, +23°C	-/N	kJ/m ²	ISO 179/1eU
简支梁缺口冲击强度, +23°C	70/100 ^[P]	kJ/m ²	ISO 179/1eA
简支梁缺口冲击强度, -30°C	20/20	kJ/m ²	ISO 179/1eA
悬臂梁缺口冲击强度, 23°C	80/90	kJ/m ²	ISO 180/1A
悬臂梁缺口冲击强度, -30°C	15/15	kJ/m ²	ISO 180/1A
悬臂梁缺口冲击强度, -40°C	20/17	kJ/m ²	ISO 180/1A
Poisson's ratio	0.4/0.45	-	

[P]: Partial Break

热性能

	dry/cond.		
熔融温度, 10°C/min	262/*	°C	ISO 11357-1/-3
玻璃化转变温度, 10°C/min	75/-	°C	ISO 11357-1/-2
热变形温度, 1.80 MPa	63/*	°C	ISO 75-1/-2
热变形温度, 0.45 MPa	157/*	°C	ISO 75-1/-2
维卡软化温度, 50°C/h 50N	205/*	°C	ISO 306
线性热膨胀系数, 平行, -40-23°C	110/*	E-6/K	ISO 11359-1/-2
线膨胀系数, 平行	140/*	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 平行, 23-55°C	140/-	E-6/K	ASTM E 831
线性热膨胀系数, 平行, 55-160°C	160/*	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 垂直, -40-23°C	110/*	E-6/K	ISO 11359-1/-2
线膨胀系数, 垂直	130/*	E-6/K	ISO 11359-1/-2
线膨胀系数, 垂直, 23-55°C	130/-	E-6/K	ASTM E 831



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线膨胀系数, 垂直, 55-160°C	130/*	E-6/K	ISO 11359-1/-2
相对温度指数, 电气性能, 0.75mm	125	°C	UL 746B
相对温度指数, 电气性能, 1.5mm	125	°C	UL 746B
相对温度指数, 电气性能, 3mm	125	°C	UL 746B
相对温度指数, 冲击, 0.75mm	75	°C	UL 746B
相对温度指数, 冲击, 1.5mm	75	°C	UL 746B
相对温度指数, 冲击, 3mm	75	°C	UL 746B
相对温度指数, 强度, 0.75mm	85	°C	UL 746B
相对温度指数, 强度, 1.5mm	85/*	°C	UL 746B
相对温度指数, 强度, 3mm	85	°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
厚度为h时的燃烧性	HB/*	class	IEC 60695-11-10
测试用试样的厚度	0.81/*	mm	IEC 60695-11-10
UL注册	yes/*	-	UL 94
燃烧性 - 氧指数	20/*	%	ISO 4589-1/-2
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
燃烧速率, 厚度: 1毫米	<80	mm/min	ISO 3795 (FMVSS 302)
电热丝起燃	15/*	s	UL 746A
电热丝起燃	20/*	s	UL 746A

电性能

	dry/cond.		
相对介电常数., 100Hz	3.5/5.9	-	IEC 62631-2-1
相对介电常数., 1MHz	3.3/3.5	-	IEC 62631-2-1
介质损耗因子, 100Hz	50/1580	E-4	IEC 62631-2-1
介质损耗因子, 1MHz	100/380	E-4	IEC 62631-2-1
体积电阻率	>1E13/8.7E10	Ohm.m	IEC 62631-3-1
表面电阻率	*/1E12	Ohm	IEC 62631-3-2
介电强度	25/-	kV/mm	IEC 60243-1
相对漏电起痕指数	600/-	-	IEC 60112
介电强度, 短期	25/26	kV/mm	IEC 60243-1
耐高安培电弧起燃性	200/* ^[1]	arcs	UL 746A
耐高安培电弧起燃性	200/* ^[1]	arcs	UL 746A

[1]: >200

其它性能

	dry/cond.		
吸湿性, 2mm	2/*	%	类似ISO 62
吸水性, 2mm	6.5/*	%	类似ISO 62
密度	1070/-	kg/m ³	ISO 1183
吸水性, 浸泡 24小时	1.1/*	%	类似ISO 62

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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 %
最优熔体温度	290 °C
注塑 熔体温度	280 °C
注塑 熔体温度	300 °C
螺杆最大切线速度	0.3 m/s
最优模具温度	80 °C
模具温度	50 °C
模具温度	100 °C
保压范围	50 - 100 MPa
保压时间	4 s/mm
喷射温度	190 °C

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 %
最优熔体温度	280 °C
熔体温度范围	275 - 290 °C

典型数据

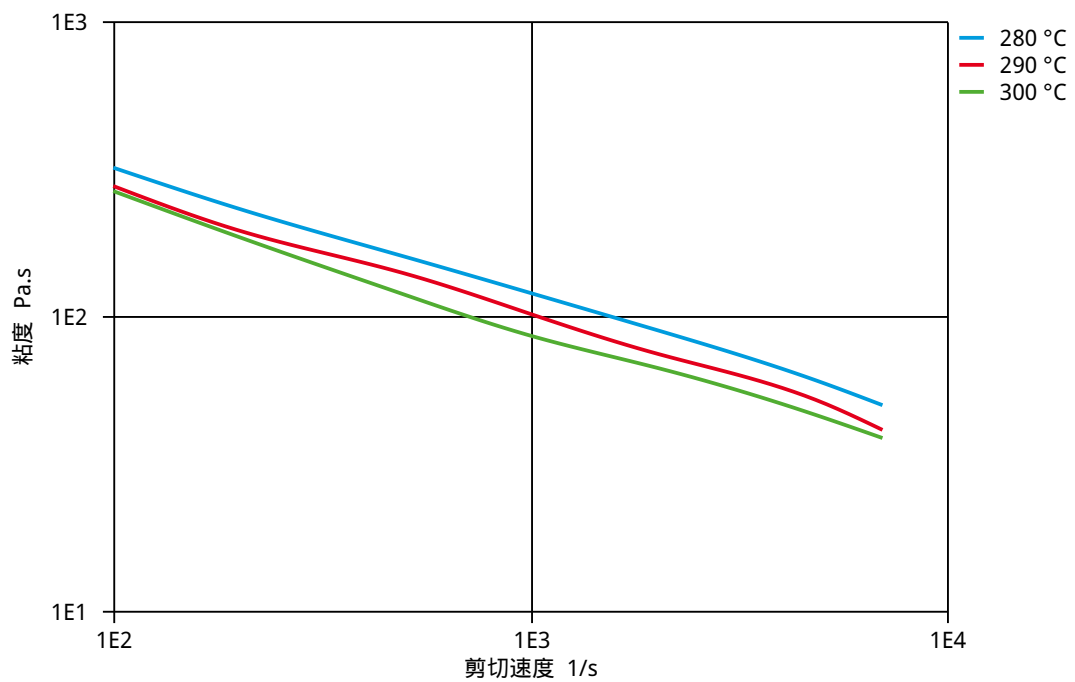
添加剂	脱模助剂
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粘度 - 剪切速度

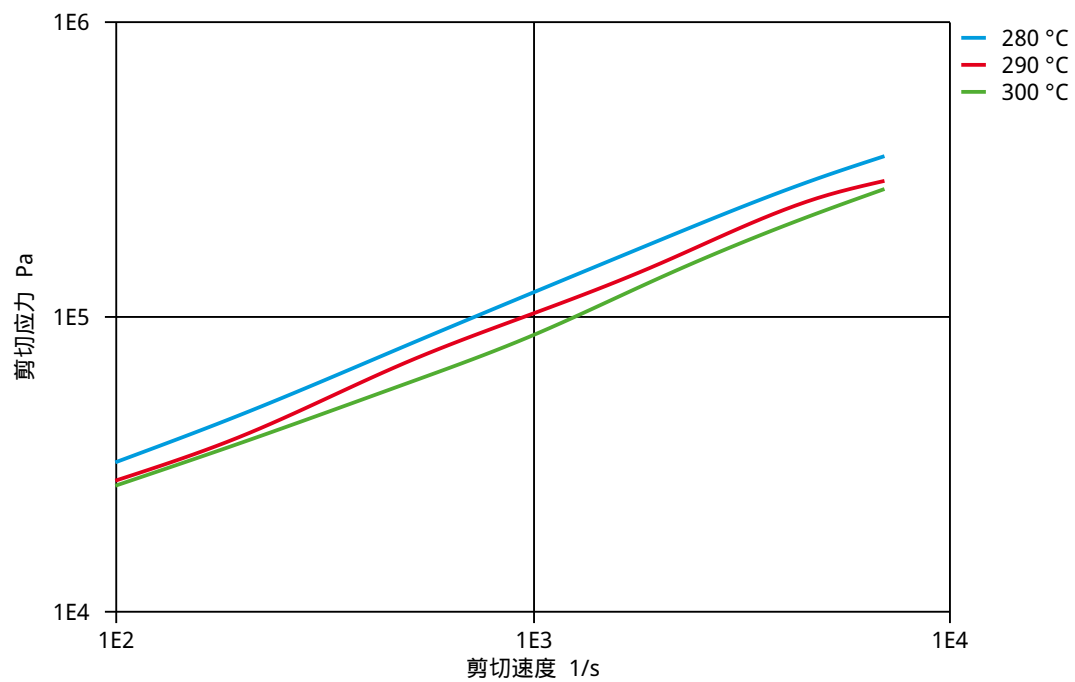




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剪切应力 - 剪切速度



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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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