

Zytel® 7301 NC010

NYLON RESIN

Zytel® 7301 NC010是一种未增强 尼龙6

总说明

树脂鉴别	PA6	ISO 1043
制品标识码	>PA6<	ISO 11469
ISO名称	ISO 16396-PA6,,M1G1N,S14-030	

流变性能

	dry/cond.		
粘数.	150/* ^[1]	cm ³ /g	ISO 307, 1157, 1628
[1]: Sulfuric acid 96%			

机械性能

	dry/cond.		
拉伸模量	2900/1500	MPa	ISO 527-1/-2
屈服应力	80/-	MPa	ISO 527-1/-2
屈服伸长率	4.5/-	%	ISO 527-1/-2
名义断裂伸长率	25/-	%	ISO 527-1/-2
断裂伸长率	50/-	%	ISO 527-1/-2
弯曲模量	2300/-	MPa	ISO 178
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/-	kJ/m ²	ISO 179/1eU
简支梁无缺口冲击强度, -40°C	N/-	kJ/m ²	ISO 179/1eU
简支梁缺口冲击强度, +23°C	6/-	kJ/m ²	ISO 179/1eA
悬臂梁缺口冲击强度, 23°C	6/-	kJ/m ²	ISO 180/1A
悬臂梁缺口冲击强度, -40°C	6/-	kJ/m ²	ISO 180/1A
无缺口悬臂梁冲击强度, 23°C	-/N	kJ/m ²	ISO 180/1U
洛氏硬度, Rockwell	119/-	-	ISO 2039-2
球压痕硬度	170/.[^{DS}]	MPa	ISO 2039-1
Poisson's ratio	0.37/0.43	-	
耐磨性	4.5/*	mm ³	ISO 4649
[DS]: Derived from similar grade			

Tribological properties

	dry/cond.		
静态摩擦系数, 铁	-/0.22		ASTM 1894
滑动摩擦系数, 1h, 钢	-/0.26		ASTM 1894

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	55/*	°C	ISO 75-1/-2
热变形温度, 0.45 MPa	160/*	°C	ISO 75-1/-2
线膨胀系数, 平行	70/*	E-6/K	ISO 11359-1/-2



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线膨胀系数, 垂直	100/*	E-6/K	ISO 11359-1/-2
固态导热系数	0.24	W/(m K)	
固态比热容	1680	J/(kg K)	
燃烧性能	dry/cond.		
灼热丝燃烧指数, 1mm	800/-	°C	IEC 60695-2-12
灼热丝燃烧指数, 3mm	850/-	°C	IEC 60695-2-12
灼热丝起燃温度, 0.75mm	725/-	°C	IEC 60695-2-13
灼热丝起燃温度, 0.4mm	725/-	°C	IEC 60695-2-12
灼热丝起燃温度, 1mm	725/-	°C	IEC 60695-2-13
灼热丝起燃温度, 1.5mm	725/-	°C	IEC 60695-2-13
灼热丝起燃温度, 2mm	725/-	°C	IEC 60695-2-13
灼热丝起燃温度, 3mm	725/-	°C	IEC 60695-2-13
灼热丝温度, 无火, 0.75mm	700/-	°C	IEC 60335-1
灼热丝温度, 无火, 1mm	700/-	°C	IEC 60335-1
灼热丝温度, 无火, 1.5mm	700/-	°C	IEC 60335-1
灼热丝温度, 无火, 2mm	700/-	°C	IEC 60335-1
灼热丝温度, 无火, 3mm	700/-	°C	IEC 60335-1
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
燃烧速率, 厚度: 1毫米	<80	mm/min	ISO 3795 (FMVSS 302)
电性能	dry/cond.		
相对介电常数., 1MHz	3.5/7	-	IEC 62631-2-1
体积电阻率	1E13/1E10	Ohm.m	IEC 62631-3-1
表面电阻率	*/1E10	Ohm	IEC 62631-3-2
相对漏电起痕指数	600/600	-	IEC 60112
其它性能	dry/cond.		
吸湿性, 2mm	3/*	%	类似ISO 62
吸水性, 2mm	9.5/*	%	类似ISO 62
密度	1130/-	kg/m ³	ISO 1183
机械性能(薄膜)	dry/cond.		
屈服应力, parallel	32/*	MPa	ISO 527-3
屈服应力, normal	31/*	MPa	ISO 527-3
屈服应变., parallel	18/*	%	ISO 527-3
屈服应变., normal	18/*	%	ISO 527-3
最大应力, parallel	90/*	MPa	ISO 527-3
最大应力, normal	80/*	MPa	ISO 527-3
最大应变., parallel	350/*	%	ISO 527-3
最大应变., normal	400/*	%	ISO 527-3
光泽度, 60°	90/*	-	ISO 2813
浑浊率	0.02/*	-	ISO 14782
下水蒸汽透过率, 23°C/85%RH	15/*	g/(m ² *d)	DIS 15106-1/-2

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下氧气透过率, 23°C/0%RH	12/*	cm ³ /(m ² *d*bar)	DIS 15105-1/-2
下二氧化碳透过率, 23°C/0%RH	45/*	cm ³ /(m ² *d*bar)	DIS 15105-1/-2
试样厚度	0.1/*	mm	

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	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	4 - 6 h
加工前水分含量	≤ 0.05 %
优良熔体温度	235 °C
熔体温度范围	230 - 240 °C

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

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- ✓ 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

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



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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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