

# Zytel® 70G25EF BK538LM (PRELIMINARY)

## 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® 70G25EF BK538LM 是一种25% 玻纤增强,可激光打标 尼龙66，用于电子电气应用

### 总说明

树脂鉴别	PA66-GF25	ISO 1043
制品标识码	>PA66-GF25<	ISO 11469

### 流变性能

	dry/cond.		
模塑收缩率, 平行	0.3/-	%	ISO 294-4, 2577
模塑收缩率, 垂直	1.1/-	%	ISO 294-4, 2577
熔体粘度	140/*	Pa.s	ISO 11443

### 机械性能

	dry/cond.		
拉伸模量	8400/6000	MPa	ISO 527-1/-2
断裂应力, 5mm/min	160/110	MPa	ISO 527-1/-2
断裂伸长率, 5mm/min	3/5	%	ISO 527-1/-2
弯曲模量	7000/5000 <sup>[DS]</sup>	MPa	ISO 178
简支梁无缺口冲击强度, +23°C	55/75	kJ/m <sup>2</sup>	ISO 179/1eU
简支梁无缺口冲击强度, -30°C	50/-	kJ/m <sup>2</sup>	ISO 179/1eU
简支梁缺口冲击强度, +23°C	8/10	kJ/m <sup>2</sup>	ISO 179/1eA
简支梁缺口冲击强度, -30°C	7/-	kJ/m <sup>2</sup>	ISO 179/1eA
泊松比	0.34/0.35		

[DS]: Derived from similar grade

### 热性能

	dry/cond.		
熔融温度, 10°C/min	260/*	°C	ISO 11357-1/-3
玻璃化转变温度, 10°C/min	80/25	°C	ISO 11357-1/-3
热变形温度, 1.80 MPa	238/*	°C	ISO 75-1/-2
线性热膨胀系数, 平行, -40-23°C	28/* <sup>[DS]</sup>	E-6/K	ISO 11359-1/-2
线膨胀系数, 平行	30/* <sup>[DS]</sup>	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 平行, 55-160°C	19/* <sup>[DS]</sup>	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 垂直, -40-23°C	73/* <sup>[DS]</sup>	E-6/K	ISO 11359-1/-2
线膨胀系数, 垂直	90/* <sup>[DS]</sup>	E-6/K	ISO 11359-1/-2
线膨胀系数, 垂直, 55-160°C	146/* <sup>[DS]</sup>	E-6/K	ISO 11359-1/-2

[DS]: Derived from similar grade

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### 燃烧性能

	dry/cond.		
1.5mm名义厚度时的燃烧性	HB/* <sup>[DS]</sup>	class	IEC 60695-11-10
测试用试样的厚度	1.5/*	mm	IEC 60695-11-10
FMVSS Class	B		ISO 3795 (FMVSS 302)
燃烧速率, 厚度: 1毫米	17	mm/min	ISO 3795 (FMVSS 302)

[DS]: Derived from similar grade

### 电性能

	dry/cond.		
体积电阻率	>1E13/1E11 <sup>[DS]</sup>	Ohm.m	IEC 62631-3-1
相对漏电起痕指数	525/-		IEC 60112

[DS]: Derived from similar grade

### 其它性能

	dry/cond.		
吸湿性, 2mm	2/*	%	类似ISO 62
吸水性, 2mm	6.4/*	%	类似ISO 62
密度	1320/-	kg/m <sup>3</sup>	ISO 1183

### 注塑

建议干燥	是
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	295 °C
注塑 熔体温度	285 °C
注塑 熔体温度	305 °C
螺杆最大切线速度	≤ 0.2 m/s
最优模具温度	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
顶出温度	223 °C

### 典型数据

添加剂 脱模助剂, Low halide content

### 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

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### 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
- ✓ 水力油Pentosin CHF 202, 125°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
- ✗ 柴油EN590, 100°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
- ✓ DOT4号刹车油, 120°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

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- ✓ 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 above data are preliminary and are subject to change as additional data are developed on subsequent lots.

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.

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