Zytel® HTN51G35HSL ECO-R 219 BK083 (PRELIMINARY)

HIGH PERFORMANCE POLYAMIDE RESIN

Zytel® HTN high performance polyamide resins feature high retention of properties upon exposure to elevated temperature, to high moisture, and to harsh chemical environments. Polymer families and grades of Zytel® HTN are tailored to optimize performance as well as processability.

Typical applications with Zytel® HTN include demanding applications in the automotive, electrical and electronics, domestic appliances, and construction industries.

Zytel® HTN51G35HSL BK083 is a 35% glass reinforced, heat stabilized, lubricated, hydrolysis resistant high performance polyamide resin containing a minimum of 20% post-industrial recycled content by weight in the finished product. It is also a PPA resin.

产品信息

树脂鉴别	PA6T/XT-GF35	ISO 1043
制品标识码	>PA6T/XT-GF35<	ISO 11469
制品标识码	>PPA-GF35<	SAE J1344
ISO名称	ISO 16396-PA6T/XT,GF35,M1CGHR,S10-120	

流变性能

	dry/cond.		
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

	dry/cond.		
拉伸模量	12000/11500	MPa	ISO 527-1/-2
拉伸断裂应力, 5mm/min	220/210	MPa	ISO 527-1/-2
断裂伸长率, 5mm/min	2.2/2.1	%	ISO 527-1/-2
简支梁无缺口冲击强度, 23°C	60/40	kJ/m²	ISO 179/1eU
简支梁无缺口冲击强度, -30°C	60/40	kJ/m²	ISO 179/1eU
简支梁缺口冲击强度, 23°C	12/10	kJ/m²	ISO 179/1eA
简支梁缺口冲击强度, -30°C	10/9	kJ/m²	ISO 179/1eA
简支梁缺口冲击强度, -40°C	9/-	kJ/m²	ISO 179/1eA

热性能

	dry/cond.		
熔融温度, 10°C/min	300/*	°C	ISO 11357-1/-3
熔融温度, 第一次升温	300/*	°C	ISO 11357-1/-3
热变形温度, 1.8 MPa	259/*	°C	ISO 75-1/-2
线性热膨胀系数, 平行	19/*	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 平行，-40-23°C	18/*	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 平行，55-160°C	18/*	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 垂直	60/*	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 垂直，-40-23°C	51/*	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 垂直，55-160°C	75/*	E-6/K	ISO 11359-1/-2
熔体比热容	1820	J/(kg K)	ISO 22007-4
固态比热容	610[DS]	J/(kg K)	ISO 22007-4

[DS]: Derived from similar grade

Revised: 2026-09-03 Source: Celanese Materials Database

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阻燃性能

	dry/cond.		
1.5mm名义厚度时的阻燃性	HB/*	class	IEC 60695-11-10
测试用试样的厚度	1.5/*	mm	IEC 60695-11-10
厚度为h时的阻燃性	HB/*	class	IEC 60695-11-10
测试用试样的厚度	0.85/*	mm	IEC 60695-11-10
氧指数	26/*	%	ISO 4589-1/-2
FMVSS Class	B		ISO 3795 (FMVSS 302)
燃烧速率, 厚度：1毫米	21[DS]	mm/min	ISO 3795 (FMVSS 302)

[DS]: Derived from similar grade

其它性能

	dry/cond.		
吸湿率, 2mm	1.4/*	%	类似ISO 62
吸水率, 2mm	4/*	%	类似ISO 62
吸水率, 浸泡 24小时	0.5[1]/*	%	类似ISO 62
密度	1470/-	kg/m³	ISO 1183

[1]: 2mm thickness

注塑

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
最低熔体温度***	320	°C
最高熔体温度	330	°C
最优模具温度	150	°C
最低模具温度	140[2]	°C
最高模具温度	180	°C
保压时间 (h表示部件的最大壁厚mm)	h²+2	s

[2]: Higher temperature needed for thinner sections.

特性

加工方法	注塑
特殊性能	热稳定, 耐水解, 可激光打标
可持续	含有可回收成分

其他信息

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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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

矿物油

- ✔ SAE 10W40号多效润滑油, 23°C
- ✔ 绝缘油, 23°C

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).

✘ 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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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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