

Crastin® HR5330HFS BK591

THERMOPLASTIC POLYESTER RESIN

Crastin® HR5330HFS BK591 is a 30% Glass Reinforced Polybutylene Terephthalate with high flow, moderately toughened, and hydrolysis resistant (HR) for injection moulding. Crastin® HR5330HFS BK591 can also be laser marked at 355, 532 and 1064 nm.

总说明

树脂鉴别	PBT-IGF30	ISO 1043
制品标识码	>PBT-IGF30<	ISO 11469

流变性能

熔体体积流动速度, MVR	8 cm ³ /10min	ISO 1133
熔体质量流动速率	13 g/10min	ISO 1133
温度	250 °C	ISO 1133
负荷	2.16 kg	ISO 1133
熔体质量流率, 温度	250 °C	ISO 1133
熔体质量流率, 载荷	2.16 kg	ISO 1133
粘数	107 ^[C, 1] cm ³ /g	ISO 307, 1157, 1628
Intrinsic viscosity	0.87 ^[2] -	ISO 307, 1157, 1628
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	230 Pa.s	ISO 11443

[C]: Calculated

[1]: VNphenol/1,2-dichlorobenzene = (141.84 * IV) - 16.00

[2]: phenol/1,2-dichlorobenzene

机械性能

拉伸模量	8500 MPa	ISO 527-1/-2
断裂应力	120 MPa	ISO 527-1/-2
断裂伸长率	3.2 %	ISO 527-1/-2
弯曲强度	180 MPa	ISO 178
简支梁无缺口冲击强度, +23°C	70 kJ/m ²	ISO 179/1eU
简支梁缺口冲击强度, +23°C	12 kJ/m ²	ISO 179/1eA
Poisson's ratio	0.34 -	

热性能

熔融温度, 10°C/min	225 °C	ISO 11357-1/-3
玻璃化转变温度, 10°C/min	65 °C	ISO 11357-1/-2
热变形温度, 1.80 MPa	205 °C	ISO 75-1/-2
线膨胀系数, 平行	22 E-6/K	ISO 11359-1/-2
线膨胀系数, 垂直	190 E-6/K	ISO 11359-1/-2
温度指数, 拉伸强度	153 °C	IEC 60216-1
温度指数, 拉伸强度	192 °C	IEC 60216-1



Crastin® HR5330HFS BK591

THERMOPLASTIC POLYESTER RESIN

燃烧性能

厚度为h时的燃烧性	HB class	IEC 60695-11-10
测试用试样的厚度	0.75 mm	IEC 60695-11-10
UL注册	yes -	UL 94
燃烧性 - 氧指数	20 %	ISO 4589-1/-2
灼热丝燃烧指数, 0.4mm	775 °C	IEC 60695-2-12
灼热丝燃烧指数, 0.75mm	775 °C	IEC 60695-2-12
灼热丝燃烧指数, 1mm	775 °C	IEC 60695-2-12
灼热丝燃烧指数, 1.5mm	750 °C	IEC 60695-2-12
灼热丝燃烧指数, 3mm	800 °C	IEC 60695-2-12
灼热丝起燃温度, 0.75mm	800 °C	IEC 60695-2-13
灼热丝起燃温度, 0.4mm	800 °C	IEC 60695-2-12
灼热丝起燃温度, 1mm	800 °C	IEC 60695-2-13
灼热丝起燃温度, 1.5mm	775 °C	IEC 60695-2-13
灼热丝起燃温度, 3mm	775 °C	IEC 60695-2-13
FMVSS Class	B -	ISO 3795 (FMVSS 302)
燃烧速率, 厚度: 1毫米	30 mm/min	ISO 3795 (FMVSS 302)

电性能

体积电阻率	>1E13 Ohm.m	IEC 62631-3-1
表面电阻率	>1E15 Ohm	IEC 62631-3-2
介电强度	34 kV/mm	IEC 60243-1
相对漏电起痕指数	525 ^[3] -	IEC 60112
相对漏电起痕指数	1 PLC	UL 746A

[3]: PTI = 500V

其它性能

吸湿性, 2mm	0.15 %	类似ISO 62
吸水性, 2mm	0.35 %	类似ISO 62
密度	1500 kg/m ³	ISO 1183

VDA性能

气候稳定delta I	-9	DIN 53236
气候稳定delta a	-0.1	DIN 53236
气候稳定delta b	-2.7	DIN 53236
气候稳定delta E	9	DIN 53236
气候稳定灰阶	3-4	ISO 105-A02



Crastin® HR5330HFS BK591

THERMOPLASTIC POLYESTER RESIN

注塑

建议干燥	是
干燥温度	120 °C
干燥时间, 除湿干燥机	2 - 4 h
加工前水分含量	≤ 0.04 %
优良熔体温度	250 °C
注塑 熔体温度	240 °C
注塑 熔体温度	260 °C
优良模具温度	80 °C
模具温度	30 °C
模具温度	130 °C
保压范围	≥ 60 MPa
保压时间	3 s/mm
背压	As low as possible MPa
喷射温度	170 °C

典型数据

添加剂

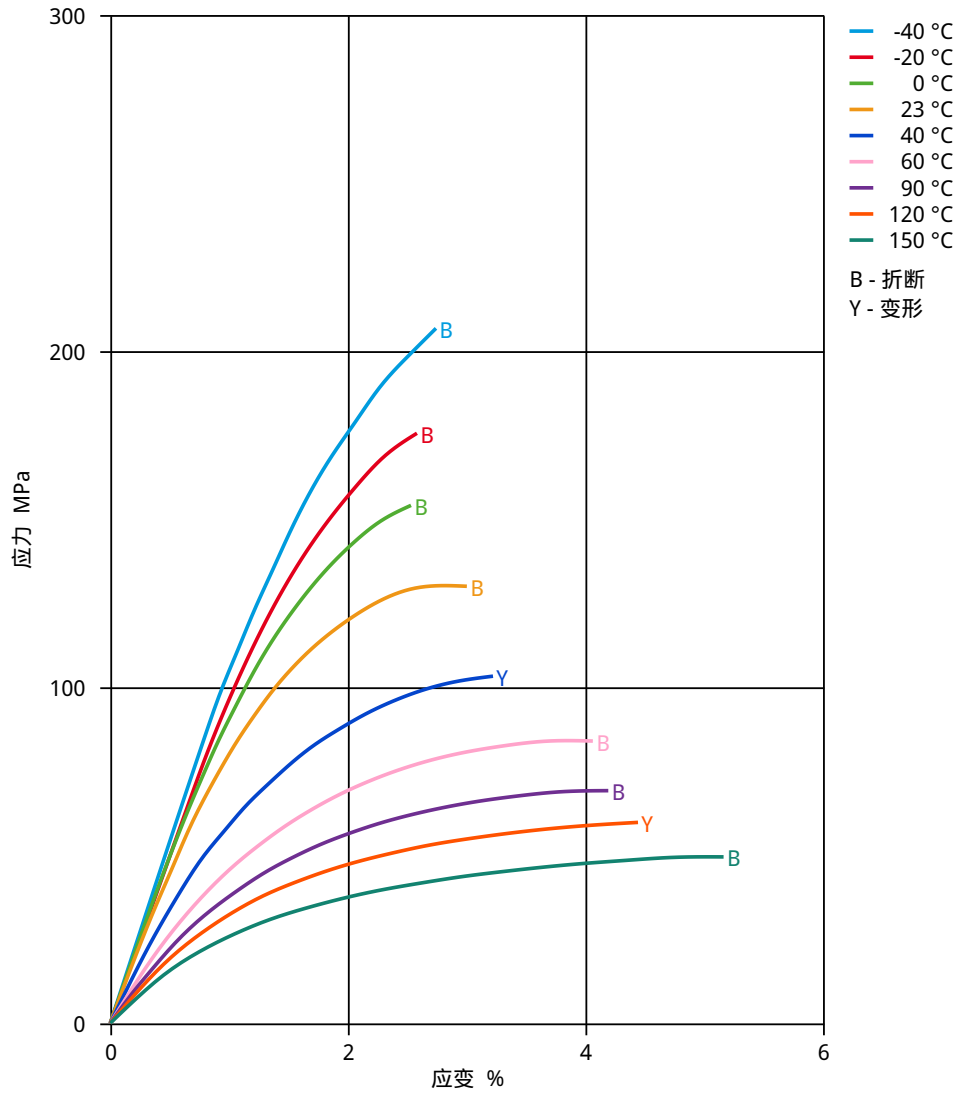
脱模助剂



Crastin® HR5330HFS BK591

THERMOPLASTIC POLYESTER RESIN

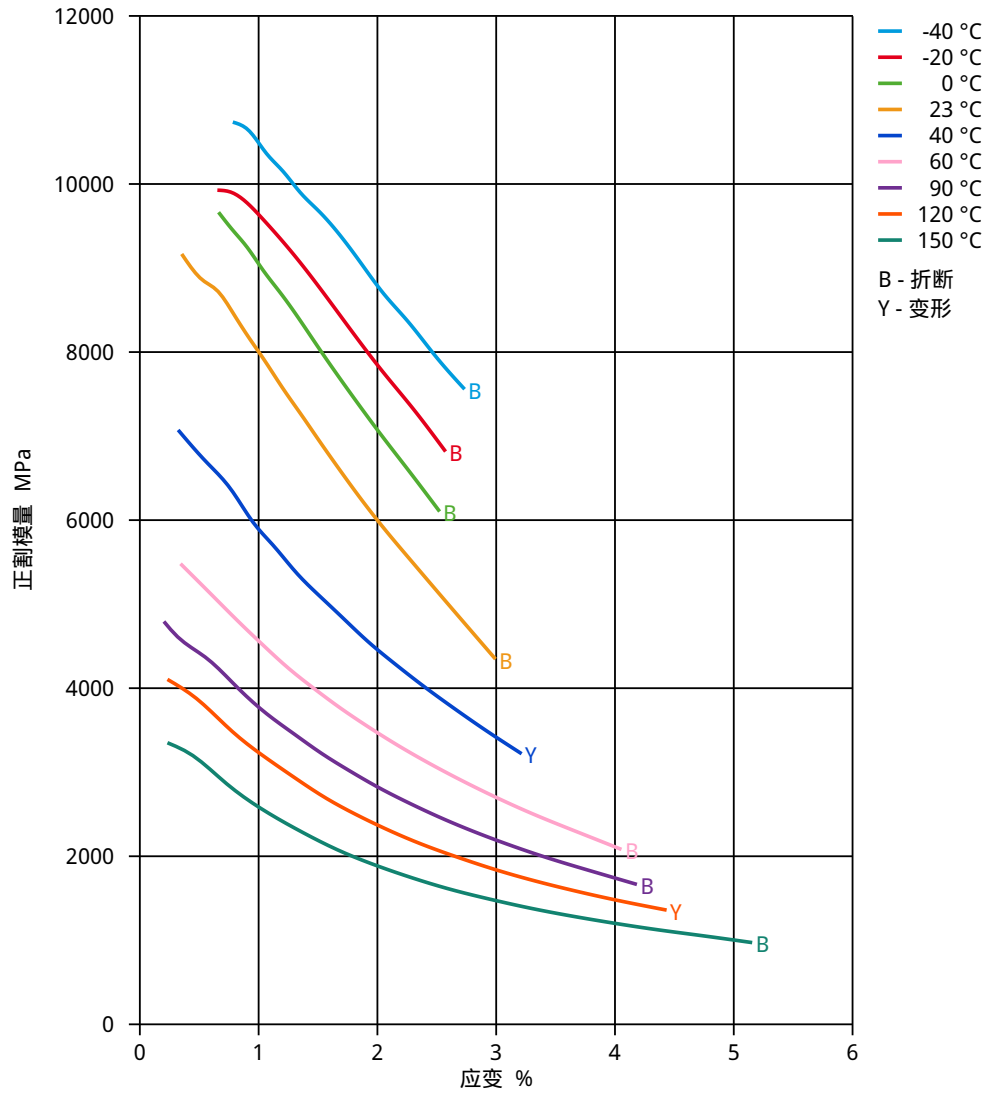
应力 - 应变.



Crastin® HR5330HFS BK591

THERMOPLASTIC POLYESTER RESIN

正割模量 - 应变.



Crastin[®] HR5330HFS BK591

THERMOPLASTIC POLYESTER RESIN

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
- ✓ 滑油OS206 304 Ref.Eng.Oil, ISP, 135°C
- ✓ 自动准双曲面齿轮油壳牌壳牌Donax, 135°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

Crastin[®] HR5330HFS BK591

THERMOPLASTIC POLYESTER RESIN

- ✓ 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
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 information set forth herein is furnished free of charge, is based on technical data that DuPont believes to be reliable, and represents typical values that fall within the normal range of properties. This information relates only to the specific material designated and may not be valid for such material used in combination with other materials or in other processes. It is intended for use by persons having technical skill, at their own discretion and risk. This information should not be used to establish specification limits nor used alone as the basis of design. Handling precaution information is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards and comply with applicable law. Since conditions of product use and disposal are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. As with any product, evaluation under end-use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate or a recommendation to infringe on patents.

CAUTION: Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract or other acknowledgement that is consistent with the DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative.

DuPont's sole warranty is that our products will meet our standard sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DUPONT SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR NON-INFRINGEMENT. DUPONT DISCLAIMS LIABILITY FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.