



Crastin® HR5330HF BK503

THERMOPLASTIC POLYESTER RESIN

Crastin®热塑性聚酯的共性包括良好的机械性能和物理性能比如刚性和韧性、耐热、耐摩擦和耐磨耗、优异的表面性能和良好的着色性能。Crastin®热塑性聚酯具有优异的电绝缘特性，可制备耐高电弧规格。许多阻燃规格获得UL认证 (V-0)。Crastin®热塑性聚酯通常具有很高的耐化学和耐热老化性能。Crastin®热塑性聚酯良好的热稳定性能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24kJ/g）。废弃处理需遵守当地法规。

Crastin®热塑性聚酯通常应用于有苛刻要求的电子电气、汽车、机械工程、化学、家用电气和运动器材领域。

Crastin® HR5330HF BK503是一种30% 玻纤增强, 耐水解, PBT

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
温度	250 °C	ISO 1133
负荷	2.16 kg	ISO 1133
模塑收缩率, 平行	0.3 %	ISO 294-4, 2577
模塑收缩率, 垂直	1.0 %	ISO 294-4, 2577

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
弯曲模量	7500 MPa	ISO 178
简支梁无缺口冲击强度, +23°C	65 kJ/m ²	ISO 179/1eU
简支梁缺口冲击强度, +23°C	11 kJ/m ²	ISO 179/1eA
简支梁缺口冲击强度, -30°C	9 kJ/m ²	ISO 179/1eA
悬臂梁缺口冲击强度, 23°C	12 kJ/m ²	ISO 180/1A
悬臂梁缺口冲击强度, -40°C	8 kJ/m ²	ISO 180/1A
无缺口悬臂梁冲击强度, 23°C	50 kJ/m ²	ISO 180/1U
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	207 °C	ISO 75-1/-2
热变形温度, 0.45 MPa	221 °C	ISO 75-1/-2
相对温度指数, 电气性能, 0.75mm	75 °C	UL 746B
相对温度指数, 冲击, 0.75mm	75 °C	UL 746B
相对温度指数, 强度, 0.75mm	75 °C	UL 746B



Crastin® HR5330HF BK503

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
灼热丝燃烧指数, 3mm	750 °C	IEC 60695-2-12
灼热丝起燃温度, 3mm	750 °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

相对介电常数., 100Hz	3.8 -	IEC 62631-2-1
相对介电常数., 1MHz	3.6 -	IEC 62631-2-1
介质损耗因子, 100Hz	81 E-4	IEC 62631-2-1
介质损耗因子, 1MHz	180 E-4	IEC 62631-2-1
体积电阻率	>1E13 Ohm.m	IEC 62631-3-1
表面电阻率	1E13 Ohm	IEC 62631-3-2
介电强度	32 kV/mm	IEC 60243-1
相对漏电起痕指数	275 -	IEC 60112

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
熔体密度	1290 kg/m ³	

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



Crastin® HR5330HF BK503

THERMOPLASTIC POLYESTER RESIN

成型

注塑

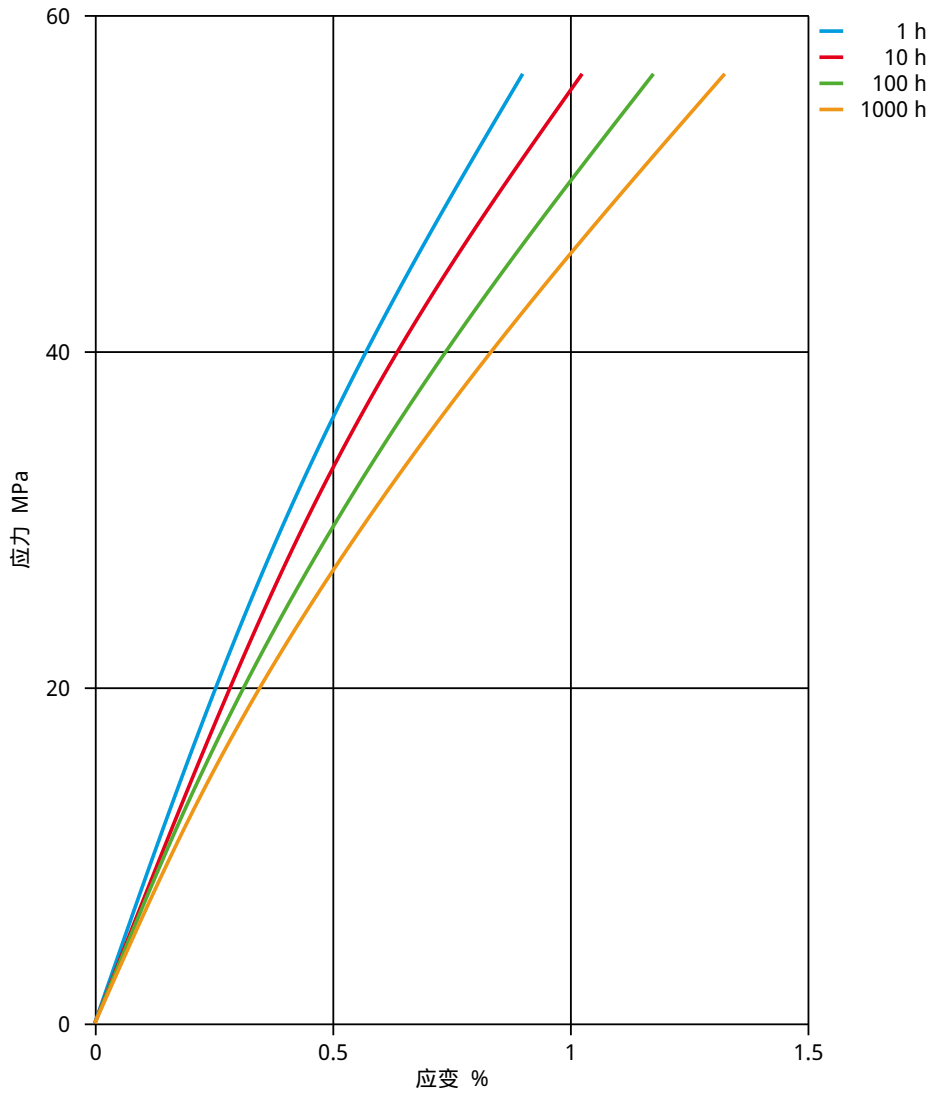
Use of hot-runners is possible with Crastin® HR resins. However we do not recommend temperature settings above 270°C and residence times at 265°C should be below 10 minutes. In case of longer residence times using hot-runners, for example after a shut-down, the complete system must be purged with glass reinforced Crastin® (type SK602/605) before starting up again. For successful processing of Crastin® HR with hot-runners, care should be taken to maintain a uniform temperature, avoid hot-spots and long residence times.



Crastin[®] HR5330HF BK503

THERMOPLASTIC POLYESTER RESIN

应力 - 应变(等时的) 23°C

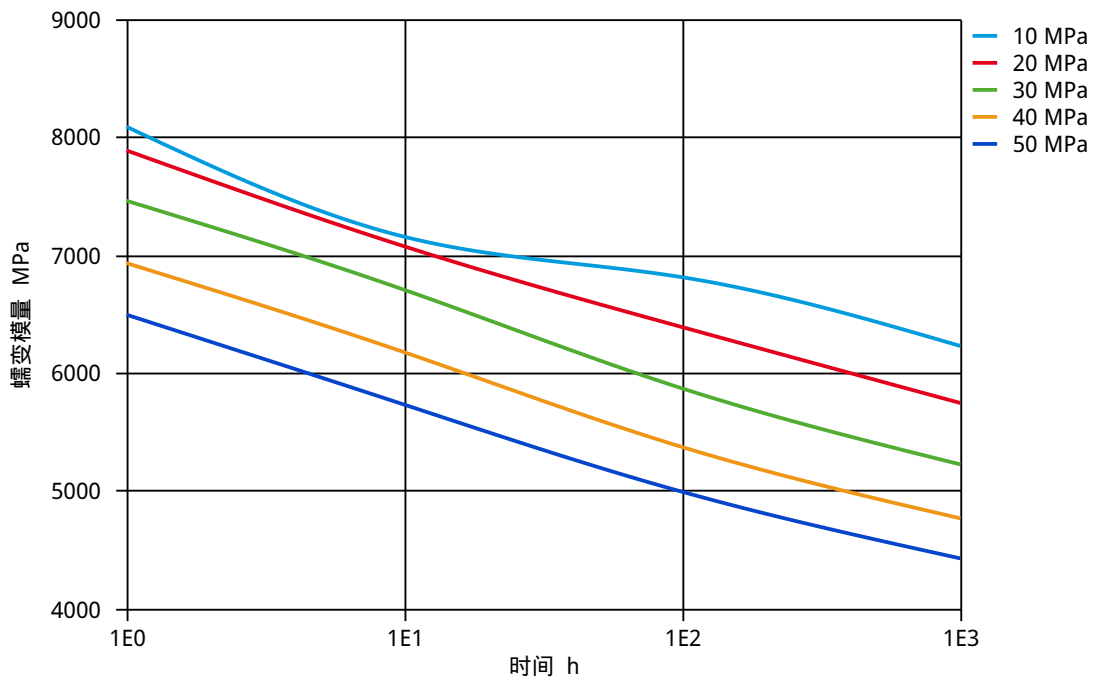




Crastin[®] HR5330HF BK503

THERMOPLASTIC POLYESTER RESIN

蠕变模量 - 时间. 23°C

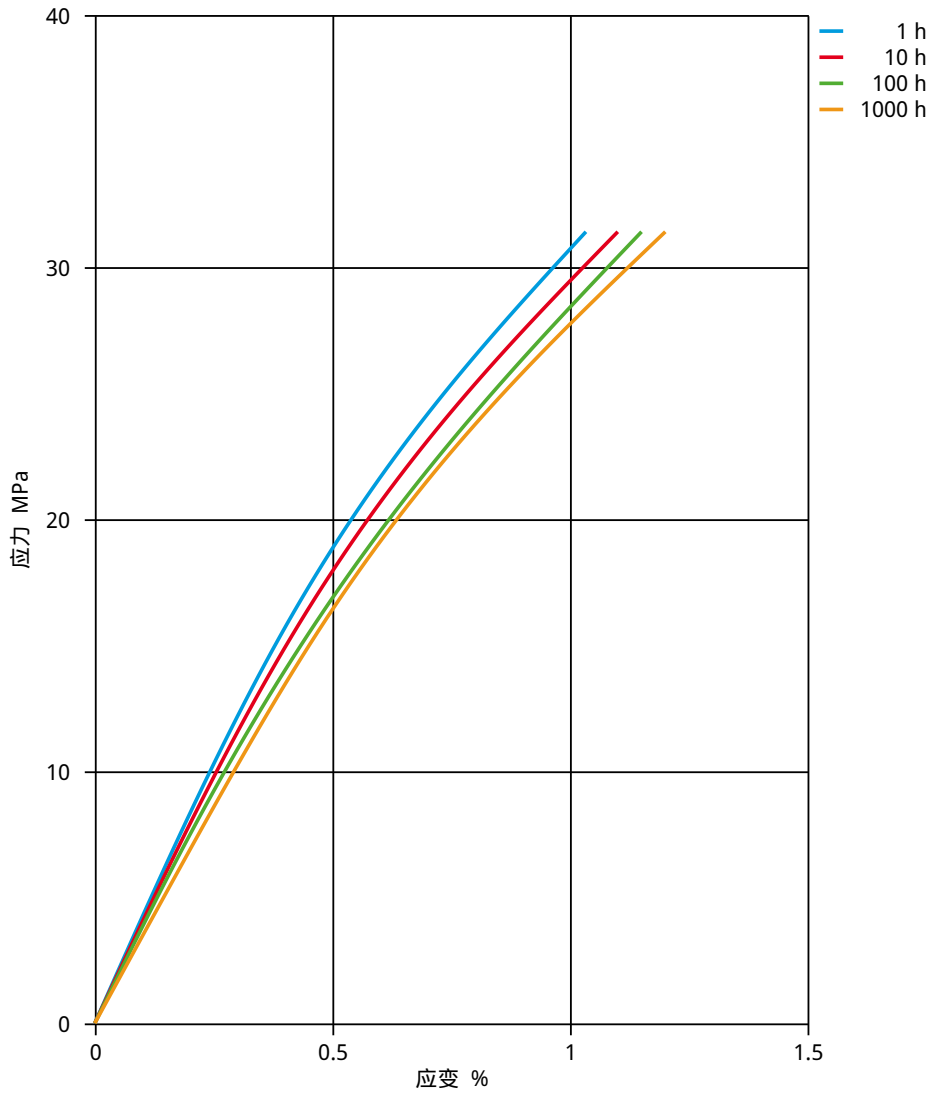




Crastin® HR5330HF BK503

THERMOPLASTIC POLYESTER RESIN

应力 - 应变(等时的) 90°C

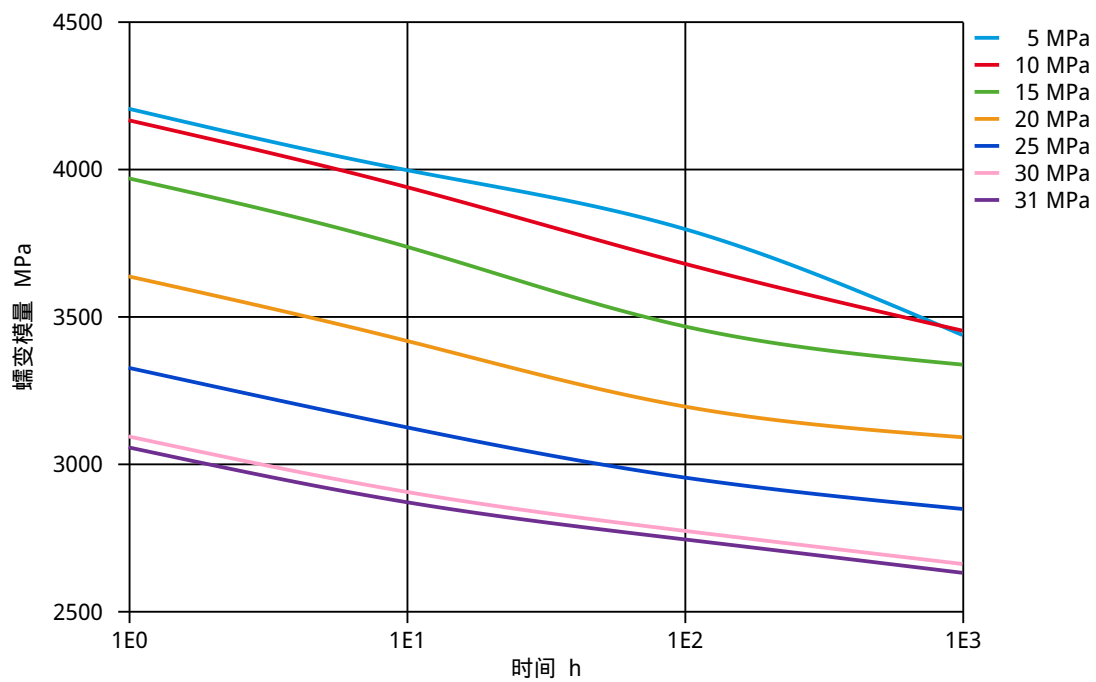




Crastin[®] HR5330HF BK503

THERMOPLASTIC POLYESTER RESIN

蠕变模量 - 时间. 90°C

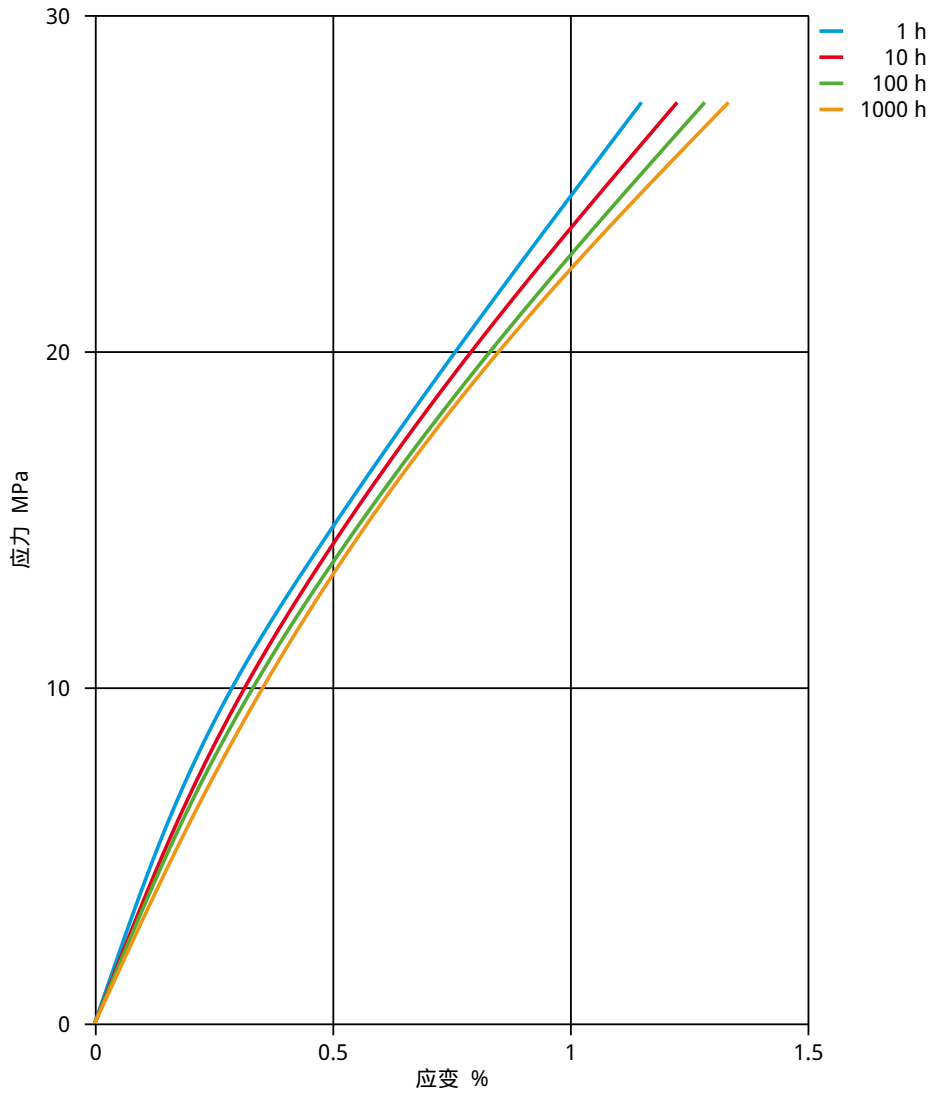




Crastin® HR5330HF BK503

THERMOPLASTIC POLYESTER RESIN

应力 - 应变(等时的) 120°C

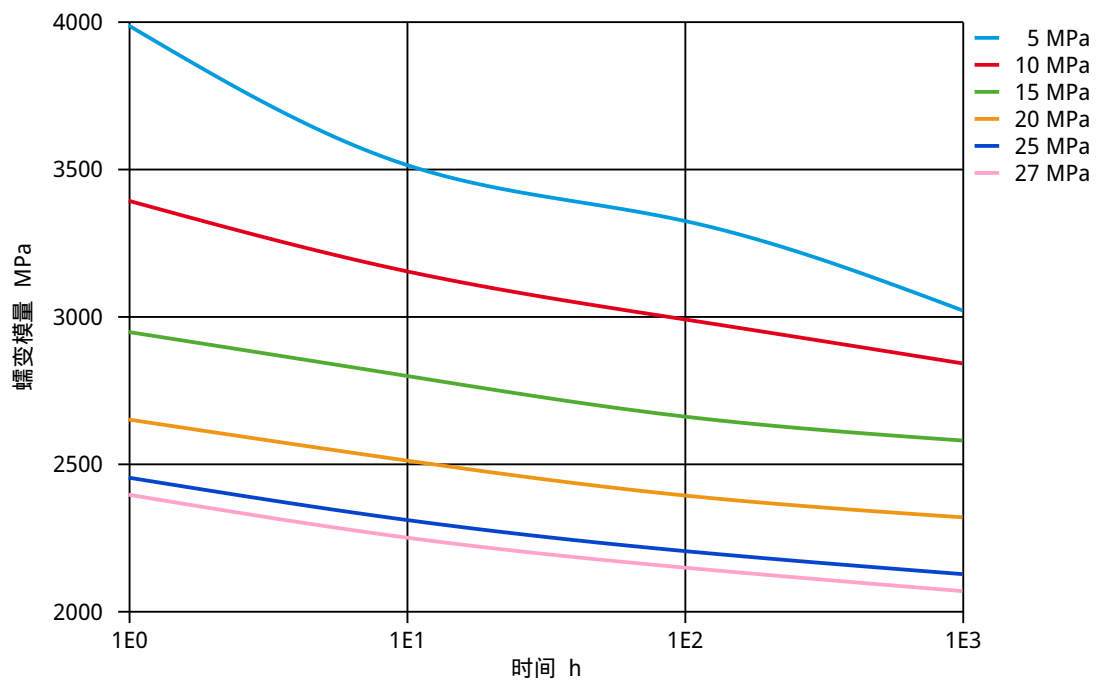




Crastin[®] HR5330HF BK503

THERMOPLASTIC POLYESTER RESIN

蠕变模量 - 时间. 120°C



Crastin[®] HR5330HF BK503

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

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

Crastin[®] HR5330HF BK503

THERMOPLASTIC POLYESTER RESIN

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.