Crastin® HR5330HF BK591 (PRELIMINARY)

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，我们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 BK591是一种30% 玻纤增强, 耐水解, PBT

产品信息

树脂鉴别	PBT-I-GF30	ISO 1043
制品标识码	>PBT-I-GF30<	ISO 11469

流变性能

熔体体积流动速度	8	cm^3/10min	ISO 1133
温度	250	°C	
负荷	2.16	kg	
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	9100	MPa	ISO 527-1/-2
拉伸断裂应力, 5mm/min	125	MPa	ISO 527-1/-2
断裂伸长率, 5mm/min	3	%	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	8.0	kJ/m^2	ISO 180/1A
悬臂梁无缺口冲击强度, 23°C	50	kJ/m^2	ISO 180/1U

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/-3
热变形温度, 1.8 MPa	207	°C	ISO 75-1/-2
热变形温度, 0.45 MPa	221	°C	ISO 75-1/-2
线性热膨胀系数, 平行	20[DS]	E-6/K	ISO 11359-1/-2
线性热膨胀系数, 垂直	150[DS]	E-6/K	ISO 11359-1/-2

[DS]: Derived from similar grade

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阻燃性能

厚度为h时的阻燃性	HB	class	IEC 60695-11-10
测试用试样的厚度	0.75	mm	IEC 60695-11-10
UL认证	yes		UL 94
灼热丝可燃指数, 3.0mm	750	°C	IEC 60695-2-12
灼热丝起燃温度, 3.0mm	750	°C	IEC 60695-2-13
FMVSS Class	B		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

吸湿率, 2mm	0.15	%	类似ISO 62
吸水率, 2mm	0.35	%	类似ISO 62
密度	1500	kg/m³	ISO 1183
熔体密度	1290	kg/m³	

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	%
最优熔体温度	250	°C
最低熔体温度***	240	°C
最高熔体温度	260	°C
最优模具温度	80	°C
最低模具温度	60	°C
最高模具温度	130	°C
保压范围	≥ 60	MPa
保压时间	3	s/mm
保压时间 (h表示部件的最大壁厚mm)	h^2+2	s
背压	尽可能低	MPa
顶出温度	170	°C

汽车

OEM	STANDARD	ADDITIONAL INFORMATION
Aumovio	PBT-I-GF30	
Bosch	N28 BN07-GF019	

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General Motors	GMW16459P-PBT-GF30W	
Hyundai	MS941-03 Type F-5 AH	
Stellantis	MS.90181 / PBT.GF30.7000T.7C.HS.HF.HR	CPN4635 BLACK
Stellantis - Chrysler	MS.50103 / CPN-4635	Black
VW Group	VW 50136-PBT-I-GF30	

特性

加工方法	注塑
添加剂	脱模助剂
特殊性能	抗冲改性, 耐水解, 可激光打标

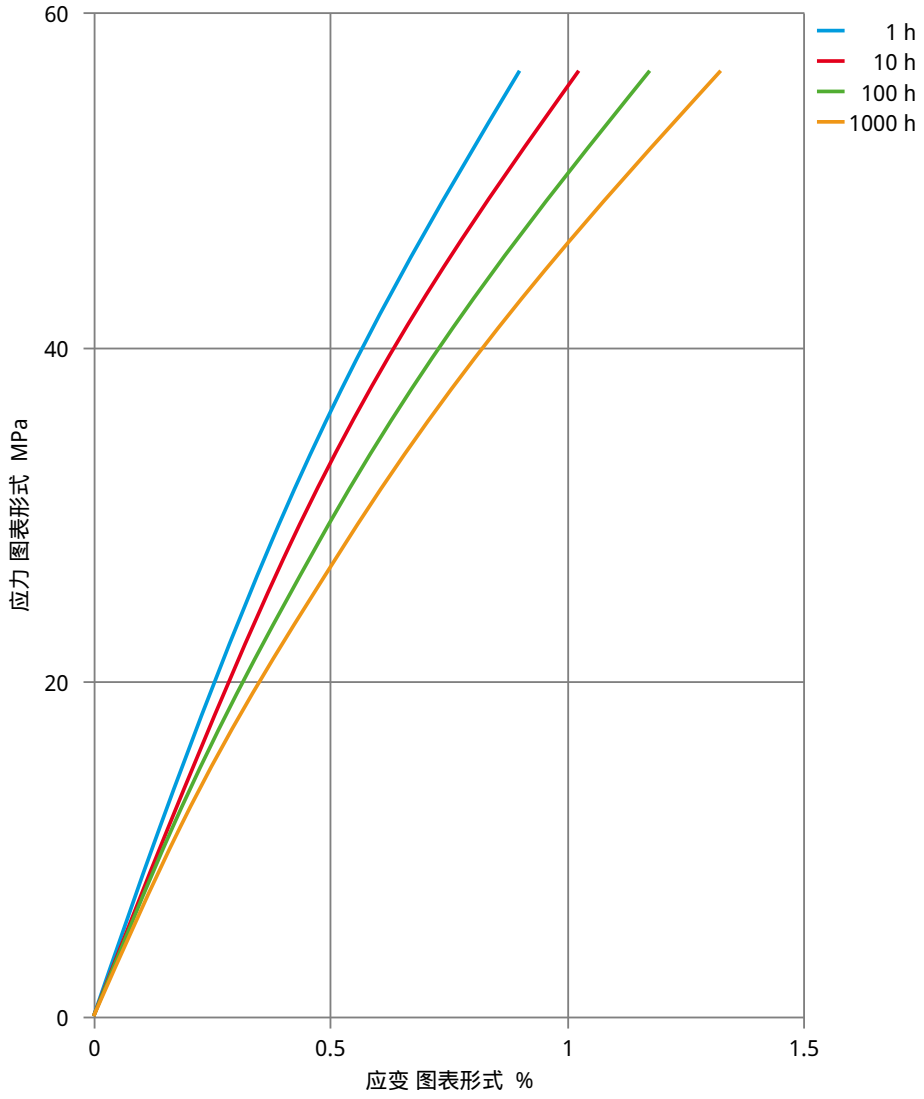
其他信息

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.

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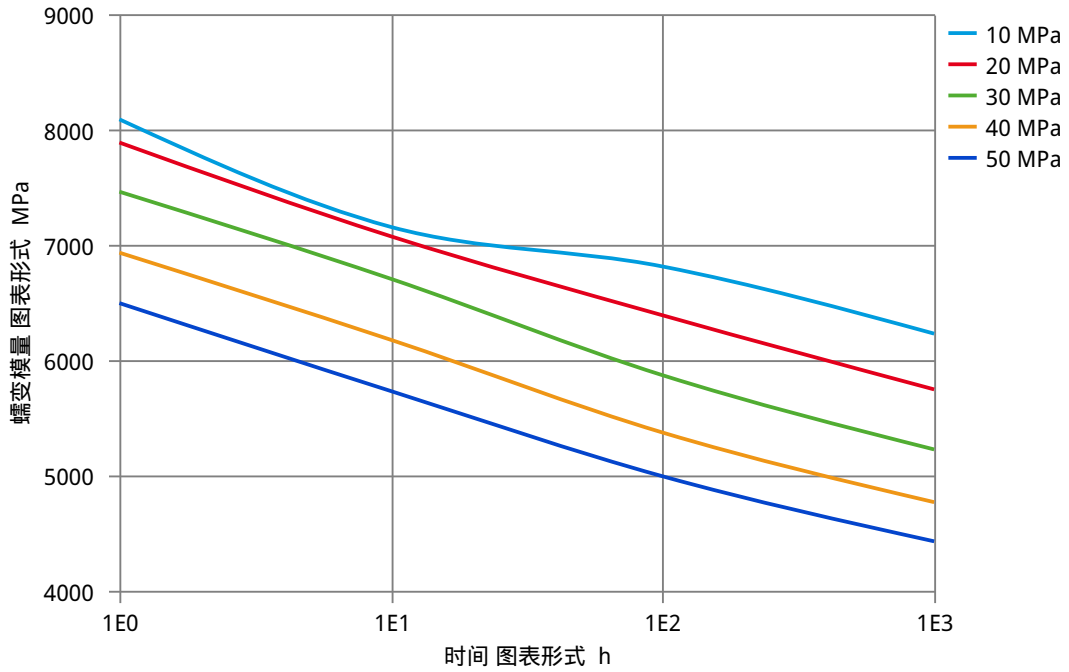
应力 - 应变 (等时的) 23°C



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THERMOPLASTIC POLYESTER RESIN

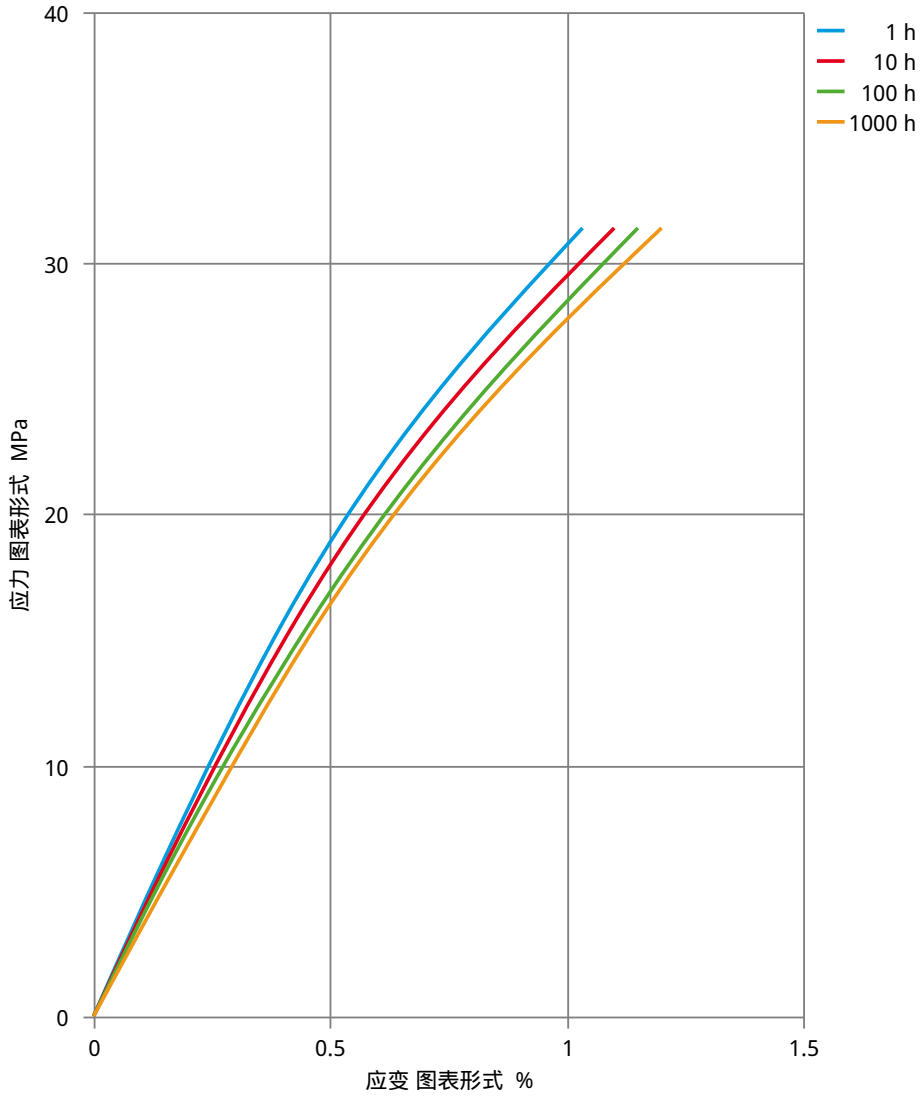
蠕变模量 - 时间 23°C



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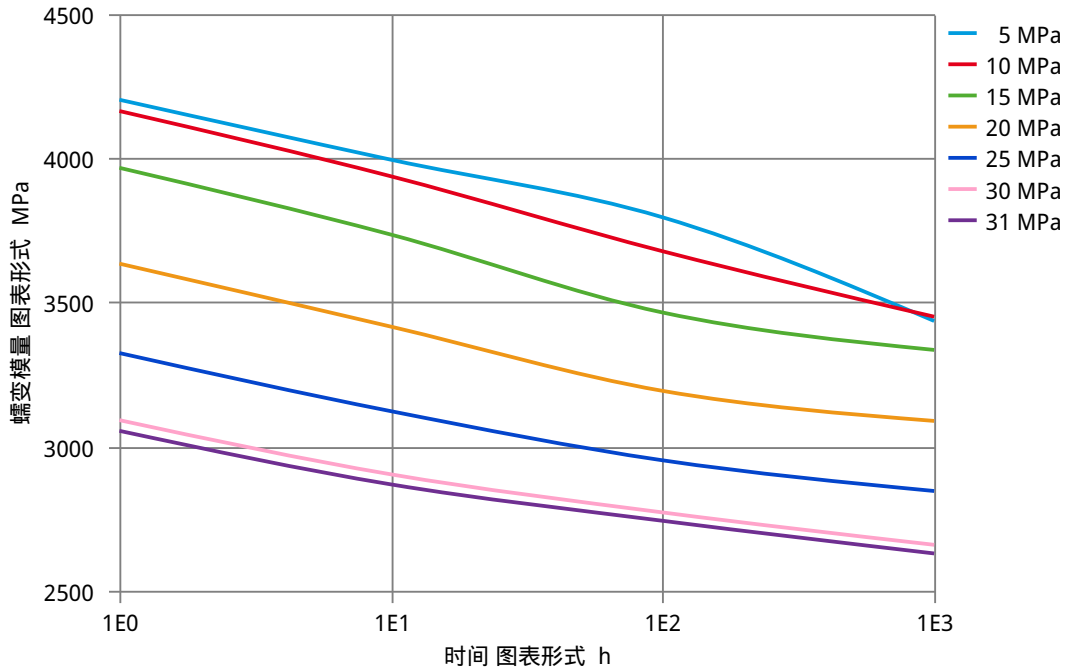
应力 - 应变 (等时的) 90°C



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THERMOPLASTIC POLYESTER RESIN

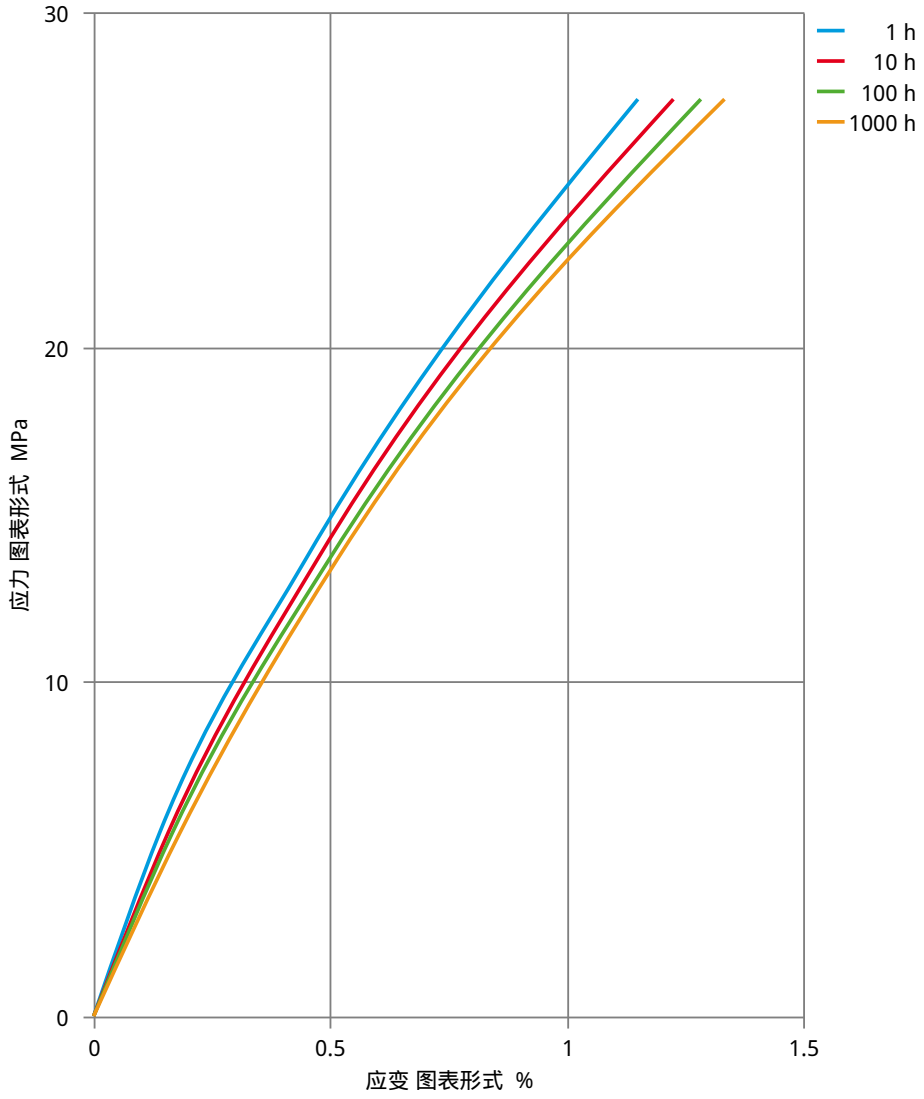
蠕变模量 - 时间 90°C



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THERMOPLASTIC POLYESTER RESIN

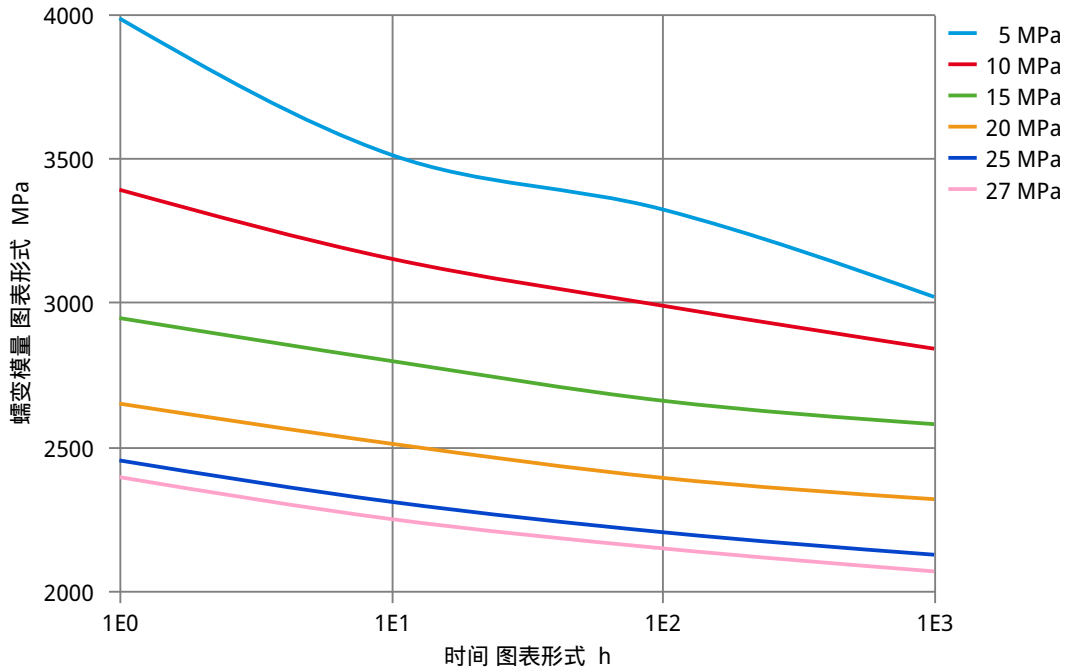
应力 - 应变 (等时的) 120°C



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蠕变模量 - 时间 120°C



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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

盐溶液

- ✔ 氯化钠溶液(10g/100g) , 23°C
- ✔ 次氯化钠溶液 (10g/100g), 23°C

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- ✔ 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).

Revised: 2026-06-22 Source: Celanese Materials Database

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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