

DuPont™ Zytel® 70G35HSLR BK099

NYLON RESIN

| 产品 | | | |
|---|--------------|-------------------|----------------------|
| Zytel® 70G35HSLR BK099是一种35% 玻纤增强, 热稳定, 耐水解, 尼龙66 | | | |
| 总说明 | 数值 | 单位 | 测试标准 |
| 树脂鉴别 | PA66-GF35 | - | ISO 1043 |
| 产品标识码 | >PA66-GF35< | - | ISO 11469 |
| 流变性能 | 干态/调节后 | 单位 | 测试标准 |
| 模塑收缩率, 平行 | 0.4 / - | % | ISO 294-4, 2577 |
| 模塑收缩率, 垂直 | 1.1 / - | % | ISO 294-4, 2577 |
| 机械性能 | 干态/调节后 | 单位 | 测试标准 |
| 拉伸模量 | 11000 / 7500 | MPa | ISO 527-1/-2 |
| 断裂应力 | 210 / 140 | MPa | ISO 527-1/-2 |
| 断裂伸长率 | 3 / 5 | % | ISO 527-1/-2 |
| 拉伸蠕变模量 | | | ISO 899-1 |
| 1h | * / 7500 | MPa | |
| 1000h | * / 5000 | MPa | |
| 无缺口简支梁冲击强度 | | | ISO 179/1eU |
| +23°C | 80 / 100 | kJ/m ² | |
| -30°C | 80 / 80 | kJ/m ² | |
| 简支梁缺口冲击强度 | | | ISO 179/1eA |
| +23°C | 15 / 18 | kJ/m ² | |
| -30°C | 10 / 10 | kJ/m ² | |
| 冲孔功, +23°C | 6 / - | J | ISO 6603-2 |
| 热性能 | 干态/调节后 | 单位 | 测试标准 |
| 熔融温度, 10°C/min | 260 / * | °C | ISO 11357-1/-3 |
| 玻璃化转变温度, 10°C/min | 70 / 20 | °C | ISO 11357-1/-2 |
| 热变形温度 | | | ISO 75-1/-2 |
| 1.80 MPa | 250 / * | °C | |
| 0.45 MPa | 255 / * | °C | |
| 维卡软化温度, 50°C/h 50N | 255 / * | °C | ISO 306 |
| 线膨胀系数, 平行 | 17 / * | E-6/K | ISO 11359-1/-2 |
| 线膨胀系数, 垂直 | 85 / * | E-6/K | ISO 11359-1/-2 |
| 熔体 | 0.22 | W/(m K) | - |
| 熔体的比热 | 2300 | J/(kg K) | - |
| 燃烧性能 | 干态/调节后 | 单位 | 测试标准 |
| 1.5mm名义厚度时的燃烧性 | HB / * | class | IEC 60695-11-10 |
| 测试用试样的厚度 | 1.5 / * | mm | IEC 60695-11-10 |
| UL注册 | yes / * | - | UL 94 |
| 厚度为h时的燃烧性 | HB / * | class | IEC 60695-11-10 |
| 测试用试样的厚度 | 0.7 / * | mm | IEC 60695-11-10 |
| UL注册 | yes / * | - | UL 94 |
| 燃烧性 - 氧指数 | 21 / * | % | ISO 4589-1/-2 |
| FMVSS Class | B | - | ISO 3795 (FMVSS 302) |
| 燃烧速率, 厚度 : 1毫米 | <80 | mm/min | ISO 3795 (FMVSS 302) |
| 电性能 | 干态/调节后 | 单位 | 测试标准 |
| 体积电阻率 | 1E13 / 1E9 | Ohm*m | IEC 62631-3-1 |
| 表面电阻率 | * / 1E13 | Ohm | IEC 62631-3-2 |
| 相对漏电起痕指数 | 425 / - | - | IEC 60112 |
| 其它性能 | 干态/调节后 | 单位 | 测试标准 |
| 吸湿性, 2mm | 1.7 / * | % | 类似ISO 62 |
| 吸水性, 2mm | 5.5 / * | % | 类似ISO 62 |
| 密度 | 1410 / - | kg/m ³ | ISO 1183 |
| 熔体密度 | 1270 | kg/m ³ | - |

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| 注塑 | 干态/调节后 | 单位 | 测试标准 |
|-------------|----------|------|------|
| 建议干燥 | 是 | - | - |
| 干燥温度 | ≥ 80 | °C | - |
| 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 | - |
| 喷射温度 | 210 | °C | - |

| 典型数据 | |
|------|--------------|
| 加工方法 | • 注塑 |
| 供货形式 | • 粒料 |
| 添加剂 | • 润滑剂 • 脱模助剂 |
| 特殊性能 | • 热稳定、耐热的 |

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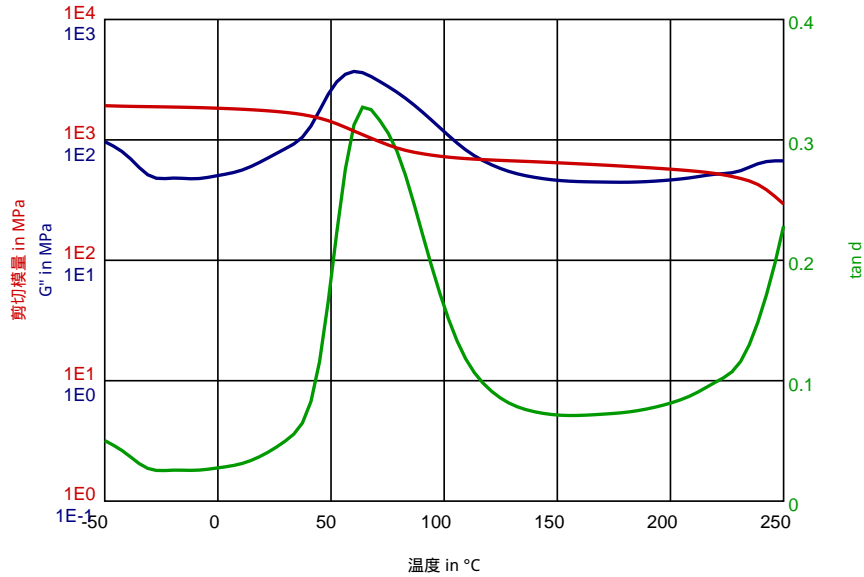


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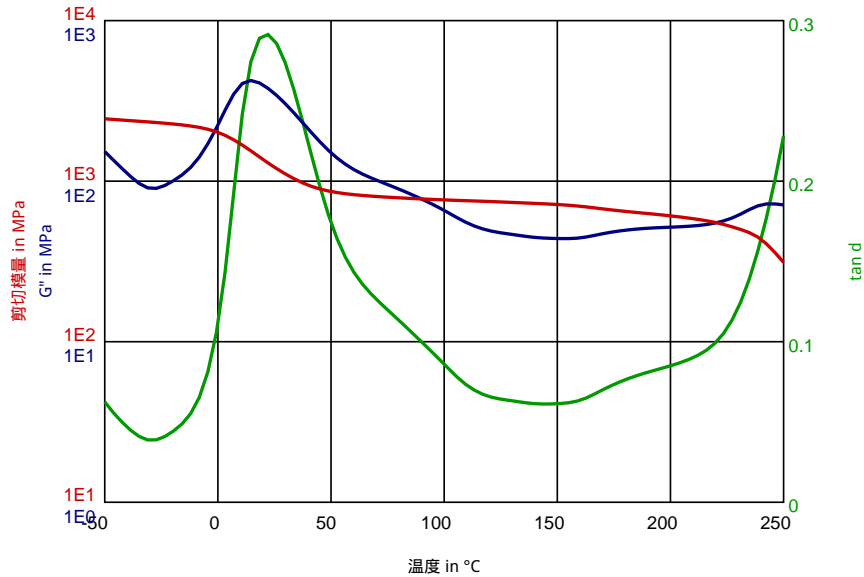
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图表

动态剪切模量 - 温度 (干)



动态剪切模量 - 温度 (湿)



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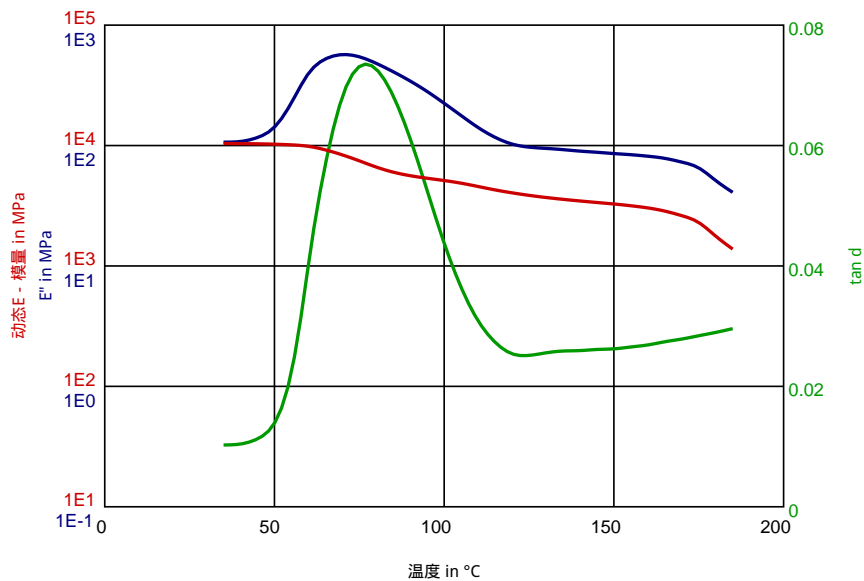


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动态E - 模量 - 温度 (干)



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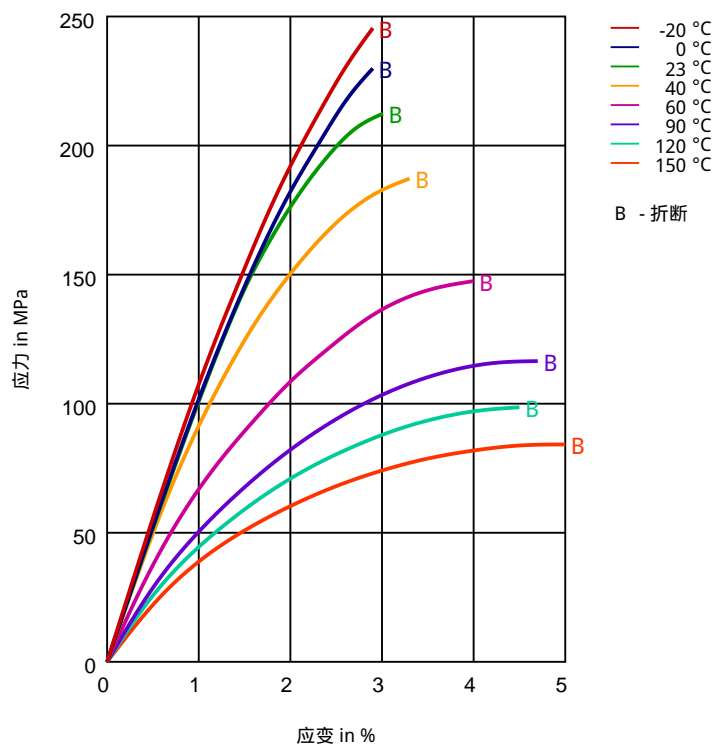


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应力 - 应变. (干)



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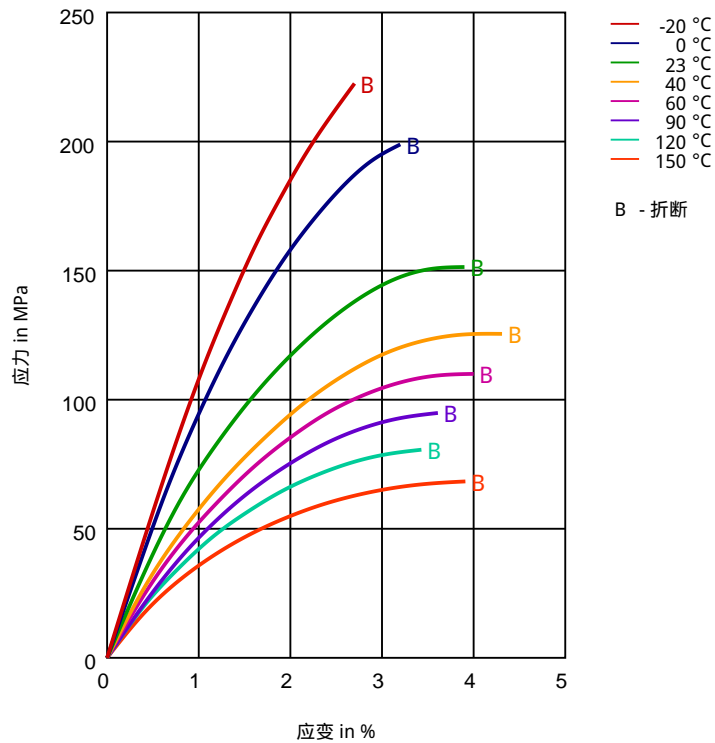
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应力 - 应变. (湿)



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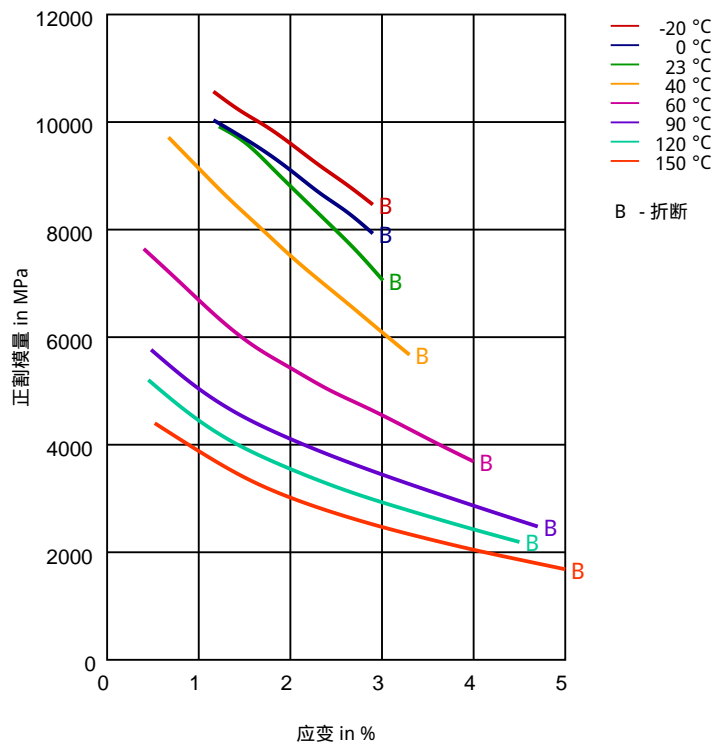
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正割模量 - 应变. (干)



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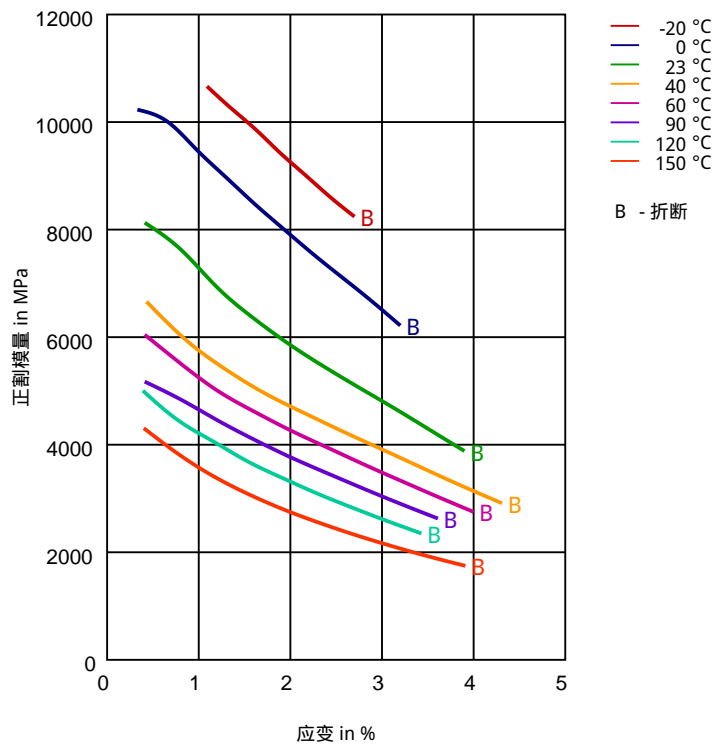
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正割模量 - 应变. (湿)



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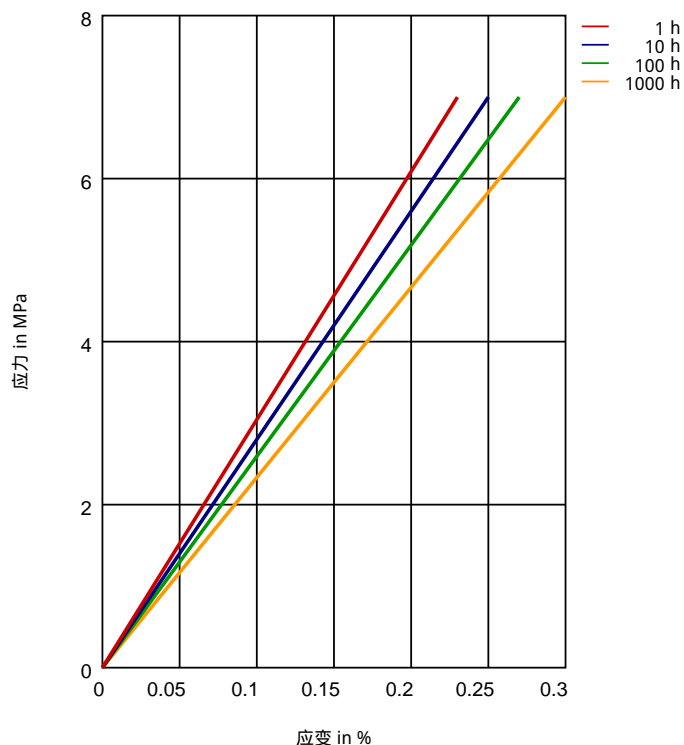


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应力 - 应变(等时的) 200°C(干)



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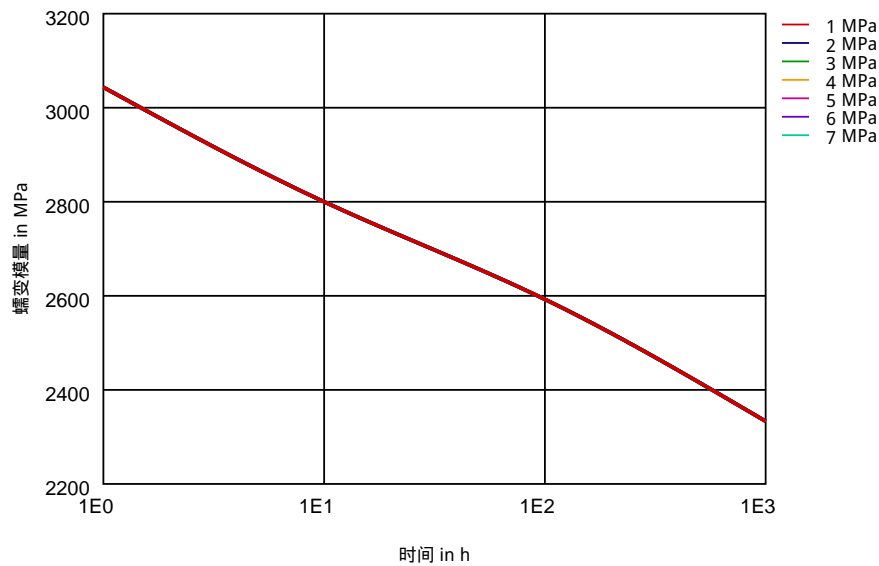


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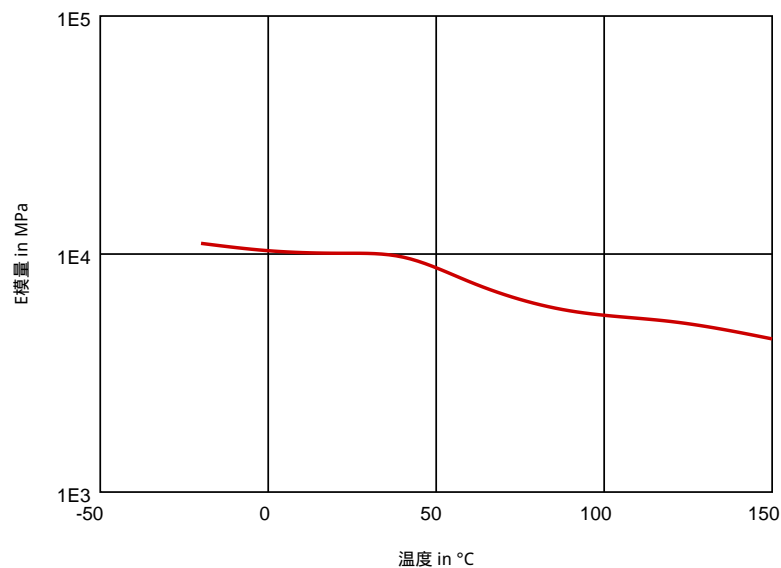
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蠕变模量 - 时间, 200°C(干)



拉伸模量 - 温度(干)



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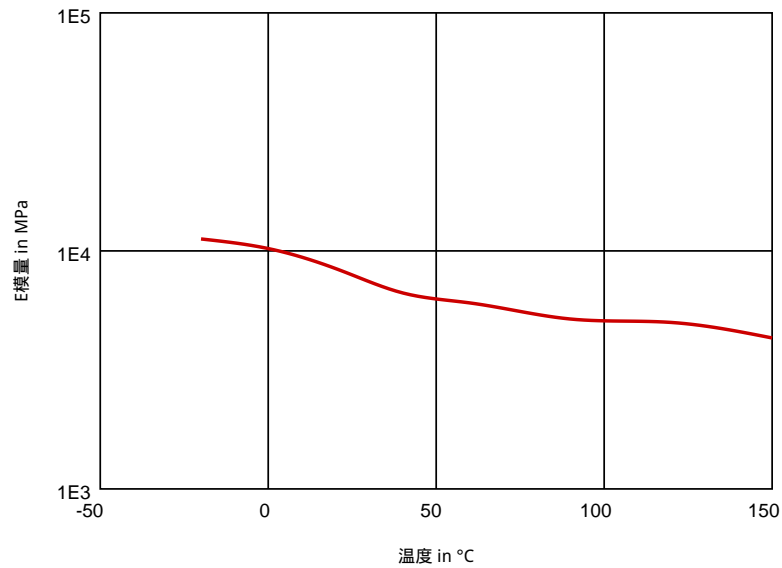


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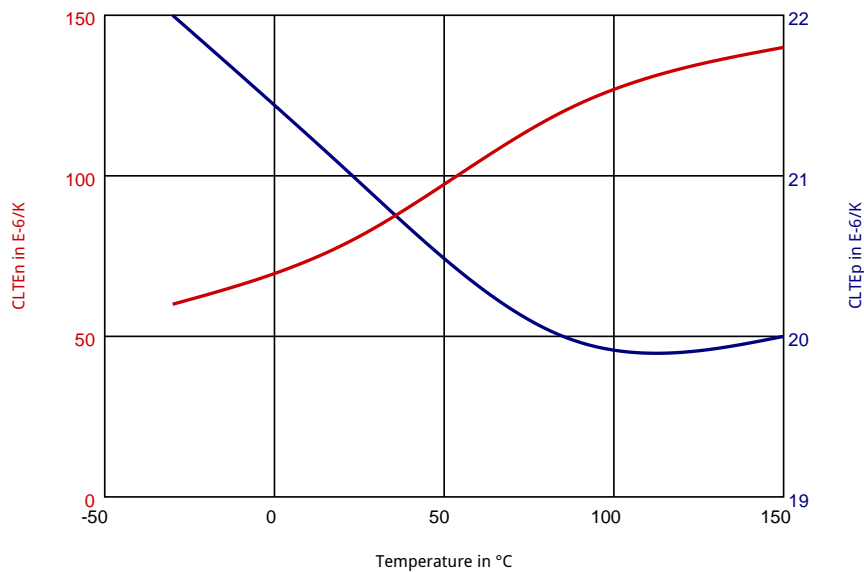
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拉伸模量 - 温度(湿)



Coeff. of linear thermal expansion, normal (measured on Zytel® 70G35HSLRA4 BK267)



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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)
- ✗ 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)

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)

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- ✓ 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)
- ✓ 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)
- ✓ 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)
- ✗ 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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