



Rynite® FR530 NC010

THERMOPLASTIC POLYESTER RESIN

Rynite® 热塑性聚酯的共性包括良好的机械和物理性能，例如强度和刚性之间良好的平衡、尺寸稳定性、耐蠕变、耐热老化、高表面光泽和固有地高温下良好的电气性能。可在很宽泛的温度范围内加工，有很好的流动性能。

Rynite® 热塑性聚酯通常应用于要求严苛的汽车、电子电器工业，成功取代金属、热固性材料和其他热塑性聚合物。

Rynite® FR530 NC010是一种30% 玻纤增强, 阻燃, PET

总说明

| | | |
|-------|------------------|-----------|
| 树脂鉴别 | PET-GF30FR(17) | ISO 1043 |
| 制品标识码 | >PET-GF30FR(17)< | ISO 11469 |

流变性能

| | | |
|-----------|-------|-----------------|
| 模塑收缩率, 平行 | 0.2 % | ISO 294-4, 2577 |
| 模塑收缩率, 垂直 | 0.8 % | ISO 294-4, 2577 |
| 模塑收缩率 | 0.2 % | ISO 294-4 |
| 模塑收缩率 | % | ISO 294-4 |

机械性能

| | | |
|-------------------|----------------------|--------------|
| 拉伸模量 | 11500 MPa | ISO 527-1/-2 |
| 断裂应力 | 135 MPa | ISO 527-1/-2 |
| 断裂伸长率 | 2 % | ISO 527-1/-2 |
| 弯曲模量 | 10500 MPa | ISO 178 |
| 压缩强度 | 200 MPa | ISO 604 |
| 剪切强度 | 60 MPa | ASTM D 732 |
| 拉伸蠕变模量, 1h | 11200 MPa | ISO 899-1 |
| 拉伸蠕变模量, 1000h | 9700 MPa | ISO 899-1 |
| 简支梁无缺口冲击强度, +23°C | 40 kJ/m ² | ISO 179/1eU |
| 简支梁无缺口冲击强度, -30°C | 40 kJ/m ² | ISO 179/1eU |
| 简支梁缺口冲击强度, +23°C | 10 kJ/m ² | ISO 179/1eA |
| 简支梁缺口冲击强度, -30°C | 9 kJ/m ² | ISO 179/1eA |
| Poisson's ratio | 0.33 - | |

热性能

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|-----------------------|----------|----------------|
| 熔融温度, 10°C/min | 252 °C | ISO 11357-1/-3 |
| 玻璃化转变温度, 10°C/min | 90 °C | ISO 11357-1/-2 |
| 热变形温度, 1.80 MPa | 225 °C | ISO 75-1/-2 |
| 热变形温度, 0.45 MPa | 243 °C | ISO 75-1/-2 |
| 维卡软化温度, 50°C/h 50N | 220 °C | ISO 306 |
| 球压测试 | 235 °C | IEC 60695-10-2 |
| 线性热膨胀系数, 平行, -40-23°C | 22 E-6/K | ISO 11359-1/-2 |
| 线膨胀系数, 平行 | 19 E-6/K | ISO 11359-1/-2 |
| 线性热膨胀系数, 垂直, -40-23°C | 68 E-6/K | ISO 11359-1/-2 |



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|----------------------|--------------------------|----------------|
| 线膨胀系数, 垂直 | 92 E-6/K | ISO 11359-1/-2 |
| 熔体 | 0.24 W/(m K) | |
| 有效导热率 ^a | 1.1E-7 m ² /s | |
| 熔体的比热 | 1720 J/(kg K) | |
| 相对温度指数, 电气性能, 0.4mm | 155 °C | UL 746B |
| 相对温度指数, 电气性能, 0.75mm | 155 °C | UL 746B |
| 相对温度指数, 电气性能, 1.5mm | 155 °C | UL 746B |
| 相对温度指数, 电气性能, 3mm | 155 °C | UL 746B |
| 相对温度指数, 冲击, 0.4mm | 155 °C | UL 746B |
| 相对温度指数, 冲击, 0.75mm | 155 °C | UL 746B |
| 相对温度指数, 冲击, 1.5mm | 155 °C | UL 746B |
| 相对温度指数, 冲击, 3mm | 155 °C | UL 746B |
| 相对温度指数, 强度, 0.4mm | 155 °C | UL 746B |
| 相对温度指数, 强度, 0.75mm | 155 °C | UL 746B |
| 相对温度指数, 强度, 1.5mm | 155 °C | UL 746B |
| 相对温度指数, 强度, 3mm | 155 °C | UL 746B |

燃烧性能

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|-------------------------------|-----------|----------------------|
| 1.5mm名义厚度时的燃烧性 | V-0 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 | V-0 class | IEC 60695-11-10 |
| 测试用试样的厚度 | 0.35 mm | IEC 60695-11-10 |
| UL注册 | yes - | UL 94 |
| 厚度为h时的5V燃烧性 | 5VA class | IEC 60695-11-20 |
| 测试用试样的厚度 | 1.5 mm | IEC 60695-11-20 |
| UL注册 | yes - | UL 94 |
| 燃烧性 - 氧指数 | 33 % | ISO 4589-1/-2 |
| 灼热丝燃烧指数, 0.75mm | 960 °C | IEC 60695-2-12 |
| 灼热丝燃烧指数, 1mm | 960 °C | IEC 60695-2-12 |
| 灼热丝燃烧指数, 2mm | 960 °C | IEC 60695-2-12 |
| 灼热丝燃烧指数, 3mm | 960 °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, 1mm | 800 °C | IEC 60695-2-13 |
| 灼热丝起燃温度, 1.5mm | 800 °C | IEC 60695-2-13 |
| 灼热丝起燃温度, 2mm | 850 °C | IEC 60695-2-13 |
| 灼热丝起燃温度, 3mm | 925 °C | IEC 60695-2-13 |
| 灼热丝温度, 无火, 1mm | 800 °C | IEC 60335-1 |
| 灼热丝温度, 无火, 2mm | 775 °C | IEC 60335-1 |
| FMVSS Class | DNI - | ISO 3795 (FMVSS 302) |
| Railway classification | R23 - | EN 45545-2 |
| Railway classification rating | HL1 - | EN 45545-2 |

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电性能

| | | |
|----------------|-------------|---------------|
| 相对介电常数., 100Hz | 4.8 - | IEC 62631-2-1 |
| 相对介电常数., 1MHz | 4.3 - | IEC 62631-2-1 |
| 介质损耗因子, 100Hz | 70 E-4 | IEC 62631-2-1 |
| 介质损耗因子, 1MHz | 126 E-4 | IEC 62631-2-1 |
| 体积电阻率 | >1E13 Ohm.m | IEC 62631-3-1 |
| 表面电阻率 | 1E14 Ohm | IEC 62631-3-2 |
| 介电强度 | 39 kV/mm | IEC 60243-1 |
| 相对漏电起痕指数 | 200 - | IEC 60112 |
| 相对漏电起痕指数 | 2 PLC | UL 746A |

其它性能

| | | |
|----------|------------------------|----------|
| 吸湿性, 2mm | 0.15 % | 类似ISO 62 |
| 吸水性, 2mm | 0.75 % | 类似ISO 62 |
| 密度 | 1680 kg/m ³ | ISO 1183 |

注塑

| | |
|-------------|-------------------------|
| 建议干燥 | 是 |
| 干燥温度 | 120 °C |
| 干燥时间, 除湿干燥机 | 4 - 6 h |
| 加工前水分含量 | ≤ 0.02 ^[1] % |
| 优良熔体温度 | 280 °C |
| 注塑 熔体温度 | 270 °C |
| 注塑 熔体温度 | 290 °C |
| 螺杆大的切线速度 | 0.2 m/s |
| 优良模具温度 | 110 °C |
| 模具温度 | 100 °C |
| 模具温度 | 120 ^[2] °C |
| 保压范围 | ≥ 80 MPa |
| 保压时间 | 4 s/mm |
| 背压 | As low as possible MPa |
| 喷射温度 | 170 °C |

[1]: At levels above 0.02%, strength and toughness will decrease, even though parts may not exhibit surface defects.

[2]: (6mm - 1mm thickness)

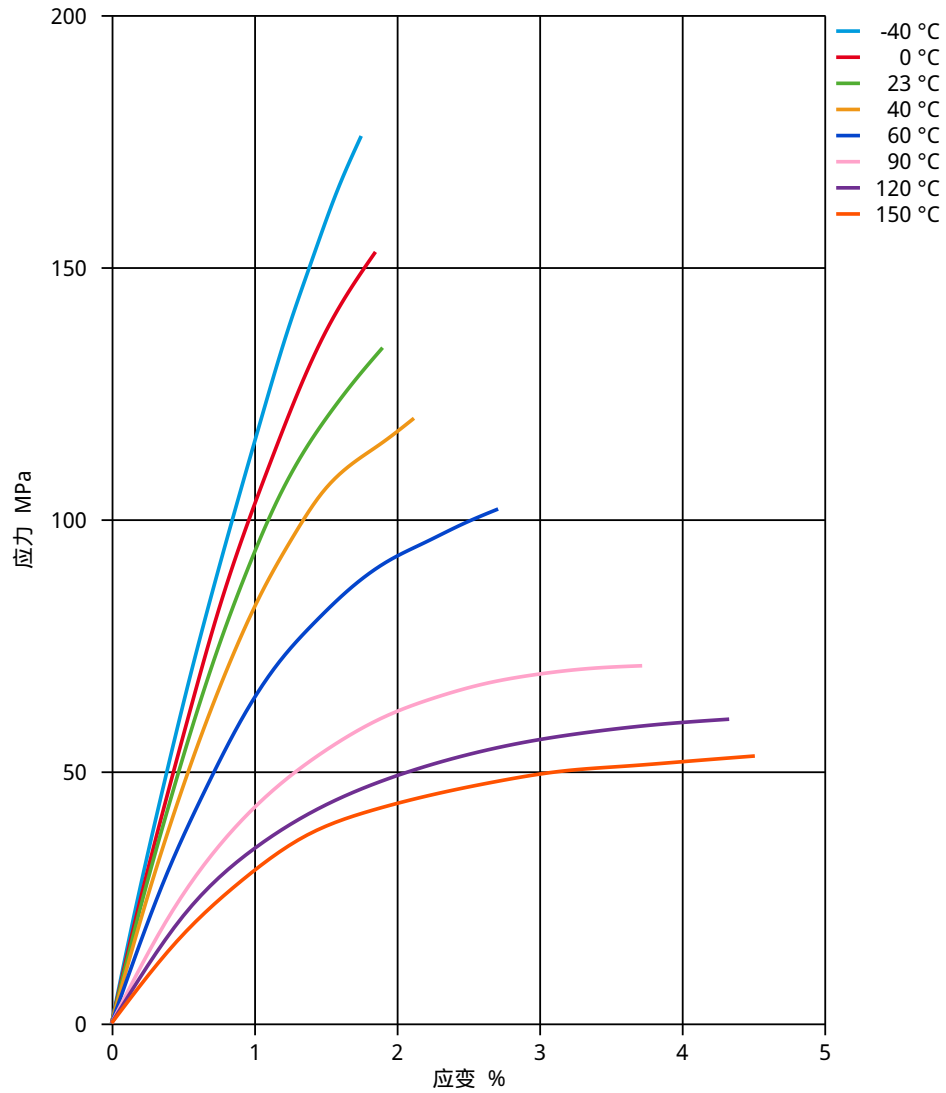
典型数据

添加剂
脱模助剂, 阻燃剂

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应力 - 应变.

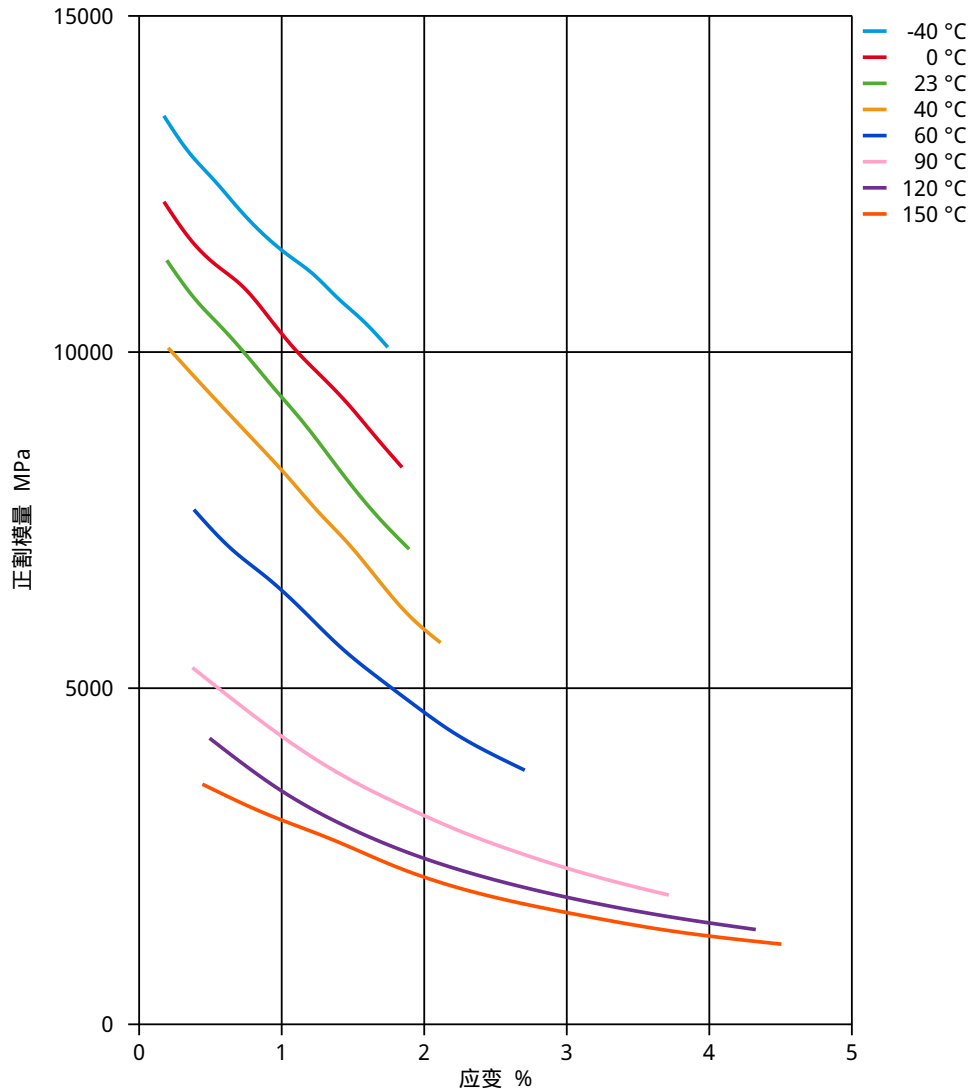




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正割模量 - 应变.



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