



Rynite® 530 BK503

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® 530 BK503是一种30% 玻纤增强 PET

总说明

| | | |
|-------|------------|-----------|
| 树脂鉴别 | PET-GF30 | ISO 1043 |
| 制品标识码 | >PET-GF30< | ISO 11469 |

流变性能

| | | |
|-----------|--------|-----------------|
| 模塑收缩率, 平行 | 0.3 % | ISO 294-4, 2577 |
| 模塑收缩率, 垂直 | 0.9 % | ISO 294-4, 2577 |
| 模塑收缩率 | 0.45 % | ISO 294-4 |
| 模塑收缩率 | 0.1 % | ISO 294-4 |

机械性能

| | | |
|-------------------|-----------------------|--------------|
| 拉伸模量 | 10200 MPa | ISO 527-1/-2 |
| 断裂应力 | 150 MPa | ISO 527-1/-2 |
| 断裂伸长率 | 2.1 % | ISO 527-1/-2 |
| 弯曲模量 | 8940 MPa | ISO 178 |
| 弯曲强度 | 210 MPa | ISO 178 |
| 压缩强度 | 230 MPa | ISO 604 |
| 简支梁无缺口冲击强度, +23°C | 52 kJ/m ² | ISO 179/1eU |
| 简支梁无缺口冲击强度, -40°C | 45 kJ/m ² | ISO 179/1eU |
| 简支梁缺口冲击强度, +23°C | 9.5 kJ/m ² | ISO 179/1eA |
| 简支梁缺口冲击强度, -30°C | 8.5 kJ/m ² | ISO 179/1eA |
| 简支梁缺口冲击强度, -40°C | 8 kJ/m ² | ISO 179/1eA |
| 悬臂梁缺口冲击强度, 23°C | 9.5 kJ/m ² | ISO 180/1A |
| 悬臂梁缺口冲击强度, -40°C | 8.5 kJ/m ² | ISO 180/1A |
| 无缺口悬臂梁冲击强度, 23°C | 45 kJ/m ² | ISO 180/1U |
| 无缺口悬臂梁冲击强度, -40°C | 35 kJ/m ² | ISO 180/1U |
| 洛氏硬度, Rockwell | 120 - | ISO 2039-2 |
| 球压痕硬度 | 221 MPa | ISO 2039-1 |
| Poisson's ratio | 0.34 - | |



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热性能

| | | |
|----------------------|--------------|----------------|
| 熔融温度, 10°C/min | 250 °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 | 221 °C | ISO 75-1/-2 |
| 热变形温度, 0.45 MPa | 244 °C | ISO 75-1/-2 |
| 固态导热系数 | 0.29 W/(m K) | |
| 相对温度指数, 电气性能, 0.75mm | 140 °C | UL 746B |
| 相对温度指数, 电气性能, 1.5mm | 140 °C | UL 746B |
| 相对温度指数, 电气性能, 3mm | 140 °C | UL 746B |
| 相对温度指数, 电气性能, 6mm | 140 °C | UL 746B |
| 相对温度指数, 冲击, 0.75mm | 140 °C | UL 746B |
| 相对温度指数, 冲击, 1.5mm | 140 °C | UL 746B |
| 相对温度指数, 冲击, 3mm | 140 °C | UL 746B |
| 相对温度指数, 冲击, 6mm | 140 °C | UL 746B |
| 相对温度指数, 强度, 0.75mm | 140 °C | UL 746B |
| 相对温度指数, 强度, 1.5mm | 140 °C | UL 746B |
| 相对温度指数, 强度, 3mm | 140 °C | UL 746B |
| 相对温度指数, 强度, 6mm | 140 °C | UL 746B |

燃烧性能

| | | |
|------------------|-----------|----------------------|
| 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 | 0.81 mm | IEC 60695-11-10 |
| UL注册 | yes - | UL 94 |
| 测试用试样的厚度 | 0.75 mm | IEC 60695-11-20 |
| UL注册 | yes - | UL 94 |
| 灼热丝燃烧指数, 2mm | 800 °C | IEC 60695-2-12 |
| 灼热丝燃烧指数, 3mm | 900 °C | IEC 60695-2-12 |
| 灼热丝起燃温度, 2mm | 825 °C | IEC 60695-2-13 |
| 灼热丝起燃温度, 3mm | 825 °C | IEC 60695-2-13 |
| 灼热丝温度, 无火, 1mm | 750 °C | IEC 60335-1 |
| 灼热丝温度, 无火, 1.5mm | 750 °C | IEC 60335-1 |
| 灼热丝温度, 无火, 2mm | 750 °C | IEC 60335-1 |
| 灼热丝温度, 无火, 3mm | 825 °C | IEC 60335-1 |
| FMVSS Class | B - | ISO 3795 (FMVSS 302) |
| 燃烧速率, 厚度 : 1毫米 | 38 mm/min | ISO 3795 (FMVSS 302) |

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电性能

| | | |
|----------------|-----------|---------------|
| 相对介电常数., 100Hz | 4.5 - | IEC 62631-2-1 |
| 相对介电常数., 1MHz | 4.2 - | IEC 62631-2-1 |
| 介质损耗因子, 100Hz | 310 E-4 | IEC 62631-2-1 |
| 介质损耗因子, 1MHz | 152 E-4 | IEC 62631-2-1 |
| 表面电阻率 | >1E15 Ohm | IEC 62631-3-2 |
| 介电强度 | 32 kV/mm | IEC 60243-1 |
| 相对漏电起痕指数 | 250 - | IEC 60112 |
| 介电强度, 短期 | 22 kV/mm | IEC 60243-1 |

其它性能

| | | |
|--------------|------------------------|----------|
| 密度 | 1560 kg/m ³ | ISO 1183 |
| 吸水性, 浸泡 24小时 | 0.05 % | 类似ISO 62 |

VDA性能

| | | |
|----------|-----------|----------|
| 有机化合物的排放 | 16 □ gC/g | VDA 277 |
| 气味测试 | 3 class | VDA 270 |
| 雾化 | mg | ISO 6452 |

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 | 285 °C |
| 注塑 熔体温度 | 280 °C |
| 注塑 熔体温度 | 300 °C |
| 螺杆大的切线速度 | 0.2 m/s |
| 优良模具温度 | 120 °C |
| 模具温度 | 110 °C |
| 模具温度 | 130 ^[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)



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