



# Rynite® FR515 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® FR515 NC010是一种15% 玻纤增强, 阻燃, PET

### 总说明

树脂鉴别	PET-GF15FR(17)	ISO 1043
制品标识码	>PET-GF15FR(17)<	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	0.8 %	ISO 294-4, 2577
模塑收缩率, 平行	0.5 %	ISO 294-4
模塑收缩率, 垂直	1.15 %	ISO 294-4
模塑收缩率	0.25 %	ISO 294-4
模塑收缩率	0.1 %	ISO 294-4

### 机械性能

拉伸模量	6800 MPa	ISO 527-1/-2
断裂应力	107 MPa	ISO 527-1/-2
断裂伸长率	2.6 %	ISO 527-1/-2
弯曲模量	5940 MPa	ISO 178
弯曲强度	170 MPa	ISO 178
压缩强度	170 MPa	ISO 604
剪切强度	50 MPa	ASTM D 732
简支梁无缺口冲击强度, +23°C	40 kJ/m <sup>2</sup>	ISO 179/1eU
简支梁无缺口冲击强度, -30°C	35 kJ/m <sup>2</sup>	ISO 179/1eU
简支梁无缺口冲击强度, -40°C	20 kJ/m <sup>2</sup>	ISO 179/1eU
简支梁缺口冲击强度, +23°C	8 kJ/m <sup>2</sup>	ISO 179/1eA
简支梁缺口冲击强度, -30°C	7 kJ/m <sup>2</sup>	ISO 179/1eA
简支梁缺口冲击强度, -40°C	7 kJ/m <sup>2</sup>	ISO 179/1eA
洛氏硬度	88 -	ISO 2039-2
洛氏硬度, Rockwell	120 -	ISO 2039-2
Poisson's ratio	0.35 -	



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### 热性能

熔融温度, 10°C/min	254 °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	200 °C	ISO 75-1/-2
热变形温度, 0.45 MPa	240 °C	ISO 75-1/-2
维卡软化温度, 50°C/h 50N	210 °C	ISO 306
线性热膨胀系数, 平行, -40-23°C	33 E-6/K	ISO 11359-1/-2
线膨胀系数, 平行	18 E-6/K	ISO 11359-1/-2
线性热膨胀系数, 平行, 55-160°C	12 E-6/K	ISO 11359-1/-2
线性热膨胀系数, 垂直, -40-23°C	70 E-6/K	ISO 11359-1/-2
线膨胀系数, 垂直	88 E-6/K	ISO 11359-1/-2
线膨胀系数, 垂直, 55-160°C	105 E-6/K	ISO 11359-1/-2
固态导热系数	0.25 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, 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, 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

### 燃烧性能

厚度为h时的燃烧性	V-0 class	IEC 60695-11-10
测试用试样的厚度	0.86 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	32 %	ISO 4589-1/-2
灼热丝燃烧指数, 3mm	960 °C	IEC 60695-2-12
灼热丝起燃温度, 3mm	875 °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, 2mm	650 °C	IEC 60335-1
FMVSS Class	B -	ISO 3795 (FMVSS 302)
燃烧速率, 厚度: 1毫米	<80 <sup>[1]</sup> mm/min	ISO 3795 (FMVSS 302)

[1]: DNI

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THERMOPLASTIC POLYESTER RESIN

## 电性能

相对介电常数, 100Hz	3.8 -	IEC 62631-2-1
相对介电常数, 1MHz	3.5 -	IEC 62631-2-1
介质损耗因子, 100Hz	90 E-4	IEC 62631-2-1
介质损耗因子, 1MHz	150 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	34 kV/mm	IEC 60243-1
相对漏电起痕指数	225 -	IEC 60112
相对漏电起痕指数	3 PLC	UL 746A
介电强度, 短期	26 kV/mm	IEC 60243-1

## 其它性能

密度	1530 kg/m <sup>3</sup>	ISO 1183
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## 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 <sup>[2]</sup> %
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 <sup>[3]</sup> °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

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

[3]: (6mm - 1mm thickness)

## 典型数据

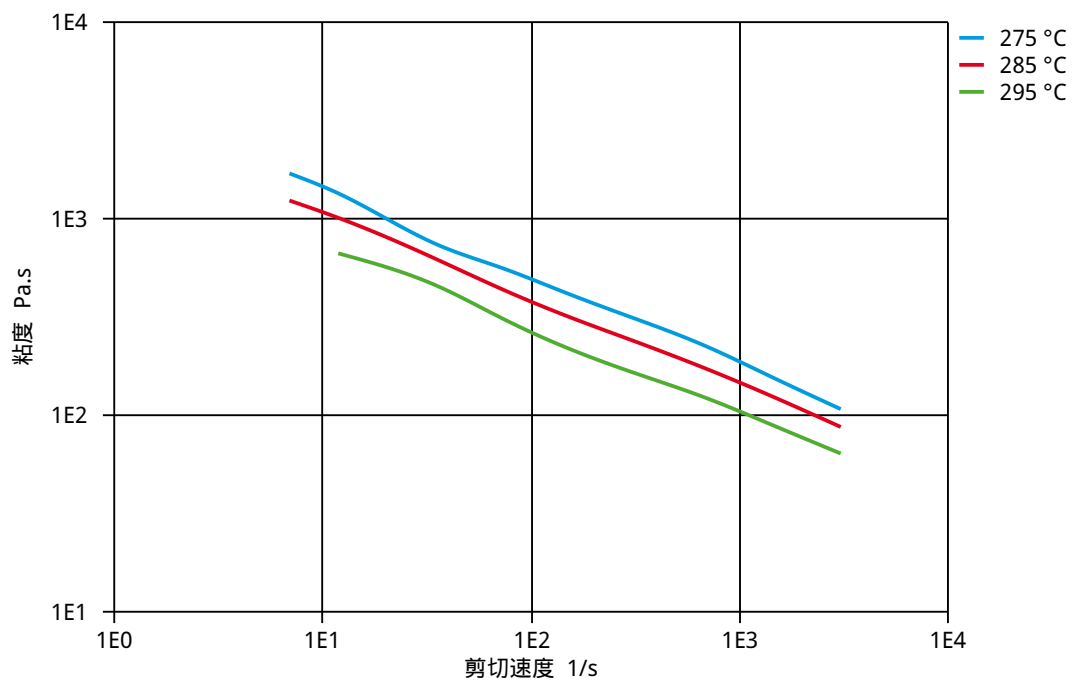
添加剂	脱模助剂, 阻燃剂
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# Rynite® FR515 NC010

THERMOPLASTIC POLYESTER RESIN

粘度 - 剪切速度

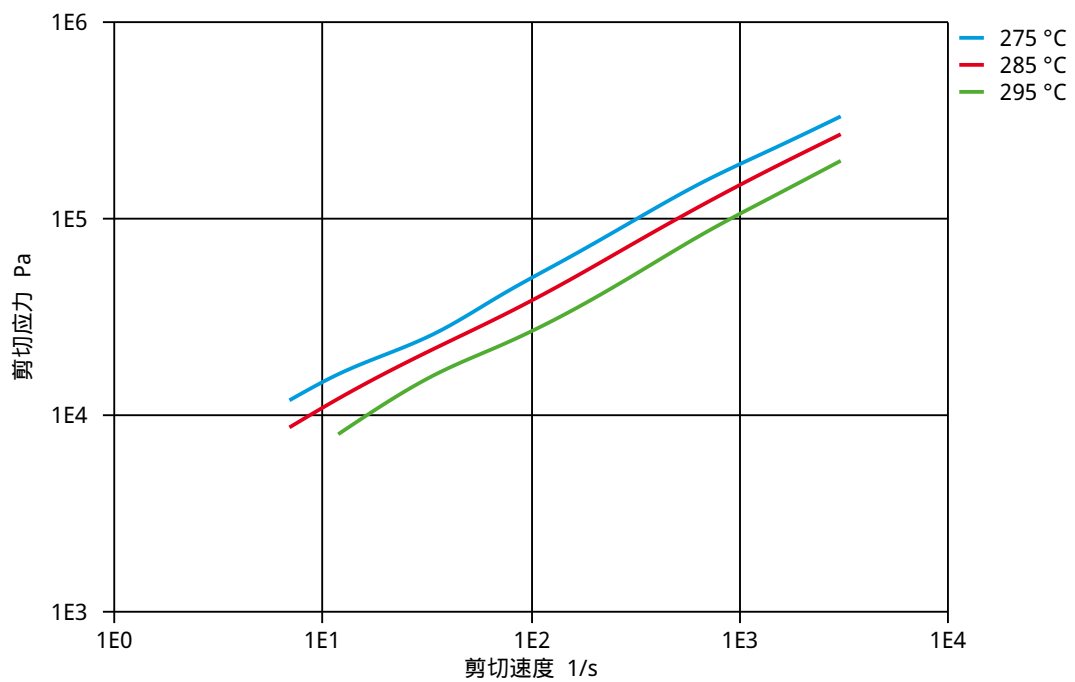




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THERMOPLASTIC POLYESTER RESIN

剪切应力 - 剪切速度

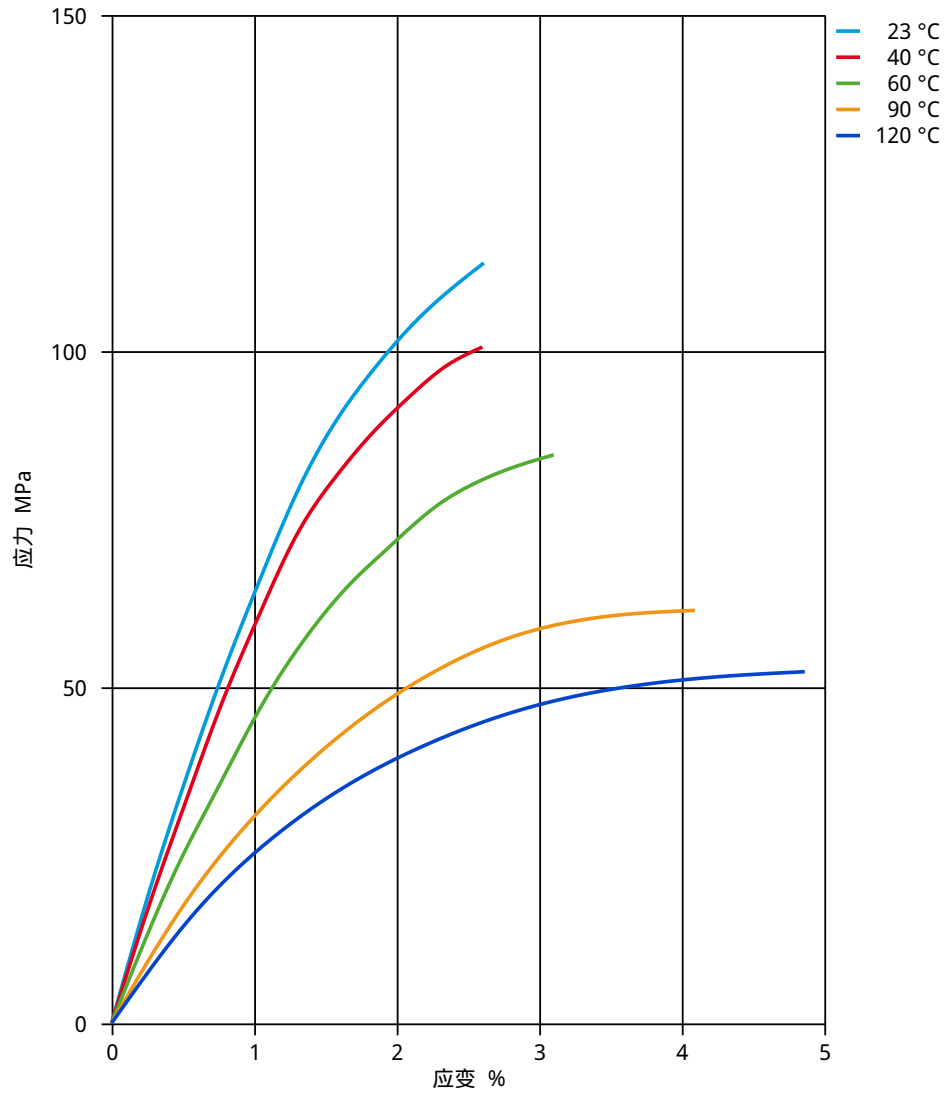




# Rynite® FR515 NC010

THERMOPLASTIC POLYESTER RESIN

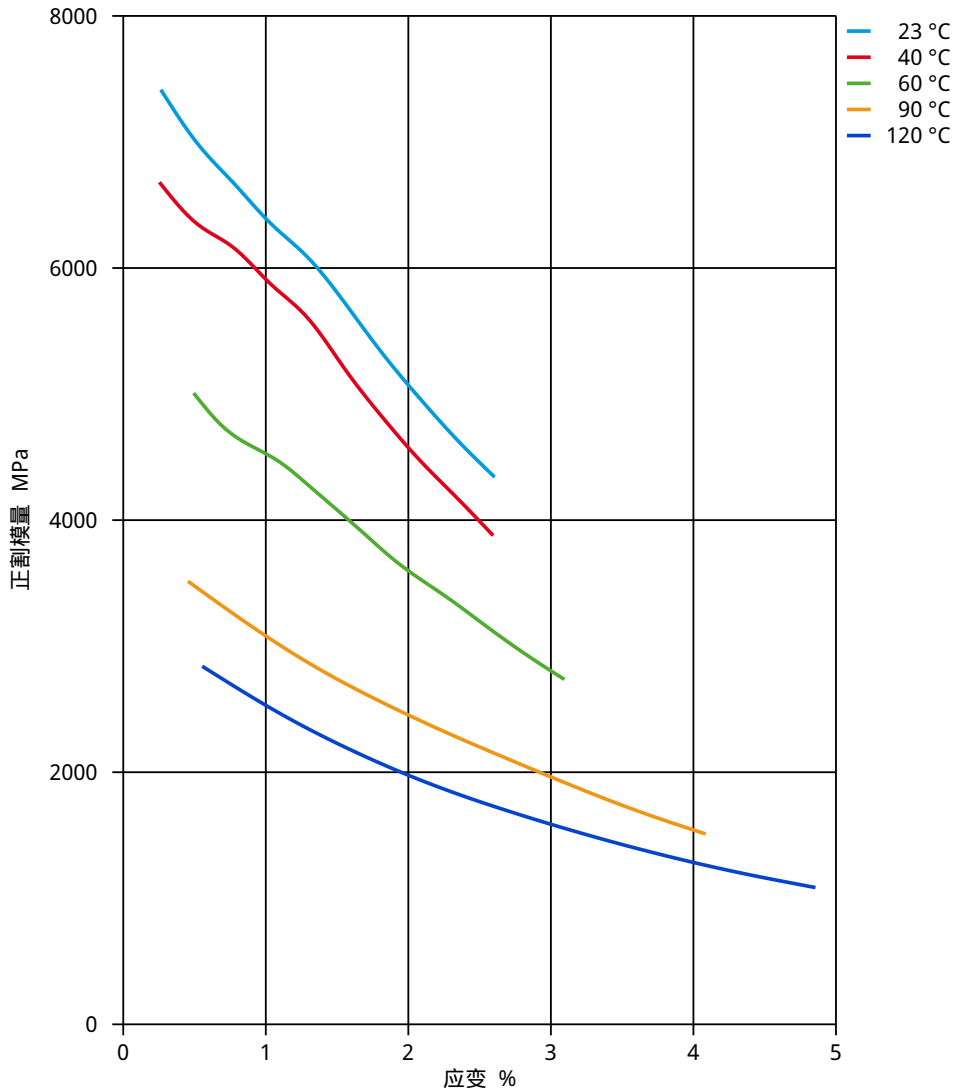
应力 - 应变.



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### 正割模量 - 应变.



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