



# Rynite® HR540SUV BK544

## THERMOPLASTIC POLYESTER RESIN

Rynite® HR540SUV BK544 is a 40% Glass Reinforced, , Polyethylene Terephthalate Developed for Injection Moulding

### Product information

Resin Identification	PET-GF40	ISO 1043
Part Marking Code	>PET-GF40<	ISO 11469

### Rheological properties

Melt mass-flow rate	20 g/10min	ISO 1133
Melt mass-flow rate, Temperature	280 °C	ISO 1133
Melt mass-flow rate, Load	5 kg	ISO 1133
Moulding shrinkage, parallel	0.3 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.8 %	ISO 294-4, 2577
Melt viscosity , @ 1000 sec-1, 280°C	200 Pa.s	ISO 11443

### Typical mechanical properties

Tensile Modulus	13200 MPa	ISO 527-1/-2
Stress at break	140 MPa	ISO 527-1/-2
Strain at break	2 %	ISO 527-1/-2
Charpy impact strength, 23°C	53 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	10 kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.33 -	

### Thermal properties

Melting temperature, 10°C/min	247 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	210 °C	ISO 75-1/-2
RTI, electrical, 1.5mm	75 °C	UL 746B
RTI, electrical, 3mm	75 °C	UL 746B
RTI, impact, 1.5mm	75 °C	UL 746B
RTI, impact, 3mm	75 °C	UL 746B
RTI, strength, 1.5mm	75 °C	UL 746B
RTI, strength, 3mm	75 °C	UL 746B

### Flammability

Burning Behav. at 1.5mm nom. thickn.	HB class	IEC 60695-11-10
Thickness tested	1.5 mm	IEC 60695-11-10
UL recognition	yes -	UL 94
Burning Behav. at thickness h	HB class	IEC 60695-11-10
Thickness tested	3 mm	IEC 60695-11-10
UL recognition	yes -	UL 94
FMVSS Class	B -	ISO 3795 (FMVSS 302)



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Burning rate, Thickness 1 mm <80 mm/min ISO 3795 (FMVSS 302)

### Electrical properties

Volume resistivity	1.3E8 Ohm.m	IEC 62631-3-1
Surface resistivity	6.5E9 Ohm	IEC 62631-3-2
Comparative tracking index	250 -	IEC 60112
Electric Strength, Short Time, 2mm	19 kV/mm	IEC 60243-1

### Other properties

Density 1620 kg/m<sup>3</sup> ISO 1183

### Injection

Drying Recommended	yes
Drying Temperature	120 °C
Drying Time, Dehumidified Dryer	4 - 6 h
Processing Moisture Content	≤0.02 <sup>[1]</sup> %
Melt Temperature Optimum	285 °C
Min. melt temperature	280 °C
Max. melt temperature	300 °C
Max. screw tangential speed	0.2 m/s
Mold Temperature Optimum	110 °C
Min. mould temperature	100 °C
Max. mould temperature	120 <sup>[2]</sup> °C
Hold pressure range	≥80 MPa
Hold pressure time	4 s/mm
Back pressure	As low as possible MPa
Ejection temperature	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)

### Additional Information

Injection molding When lower mold temperatures are used, the initial warpage and shrinkage will be lower, but the surface appearance will be poorer and the dimensional change may be greater when parts are subsequently heated.

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