

Rynite® FR335 NC010 (PRELIMINARY)

THERMOPLASTIC POLYESTER RESIN

Rynite® FR335 NC010 is a 35% glass/mineral reinforced, flame retardant, modified polyethylene terephthalate resin.

Product information

Resin Identification	PET-GF35FR(30+16)	ISO 1043
Part Marking Code	>PET-GF35FR(30+16)<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.3 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.7 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	12300 MPa	ISO 527-1/-2
Stress at break, 5mm/min	130 MPa	ISO 527-1/-2
Strain at break, 5mm/min	1.9 %	ISO 527-1/-2
Charpy impact strength, 23°C	30 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	9 kJ/m ²	ISO 179/1eA
Poisson's ratio	0.33	

Thermal properties

Melting temperature, 10°C/min	248 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	236 °C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel, -40-23°C	18 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, parallel	18 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, parallel, 55-160°C	13 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal, -40-23°C	53 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	64 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal, 55-160°C	85 E-6/K	ISO 11359-1/-2
RTI, electrical, 0.75mm	155 °C	UL 746B
RTI, electrical, 3mm	155 °C	UL 746B
RTI, impact, 0.75mm	150 °C	UL 746B
RTI, impact, 3mm	150 °C	UL 746B
RTI, strength, 0.75mm	150 °C	UL 746B
RTI, strength, 3mm	150 °C	UL 746B

Flammability

Burning Behav. at thickness h	V-0 class	UL 94
Thickness tested	0.75 mm	UL 94
UL recognition	yes	UL 94
Burning Behav. 5V at thickness h	5VA class	UL 94
Thickness tested	1.5 mm	UL 94
UL recognition	yes	UL 94

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Glow Wire Flammability Index, 0.75mm	960 °C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5mm	960 °C	IEC 60695-2-12
Glow Wire Flammability Index, 3mm	960 °C	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	825 °C	IEC 60695-2-13
Glow Wire Ignition Temperature, 1.5mm	900 °C	IEC 60695-2-13
Glow Wire Ignition Temperature, 3mm	900 °C	IEC 60695-2-13

Electrical properties

Volume resistivity	1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	1E15 Ohm	IEC 62631-3-2
Electric strength	36 kV/mm	IEC 60243-1
Comparative tracking index	300	IEC 60112
Comparative tracking index, 3.0mm	2 PLC	UL 746A

Other properties

Water absorption, Immersion 24h	0.16 %	Sim. to ISO 62
Density	1670 kg/m ³	ISO 1183

Injection

Drying Recommended	yes
Drying Temperature	120 °C
Drying Time, Dehumidified Dryer	4 - 6 h
Processing Moisture Content	≤0.02 ^[1] %
Min. melt temperature	270 °C
Max. melt temperature	280 °C
Mold Temperature Optimum	110 °C
Min. mould temperature	100 °C
Max. mould temperature	120 ^[2] °C

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

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

Characteristics

Additives	Flame retardant
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