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	130	MPa	ISO 527-1/-2
Strain at break	1.9	%	ISO 527-1/-2
Charpy impact strength, 23°C	30	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	9	kJ/m²	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
CLTE, 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
CLTE, Parallel, 55-160°C	13	E-6/K	ISO 11359-1/-2
CLTE, 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	IEC 60695-11-10
Thickness tested	0.75	mm	IEC 60695-11-10
UL recognition	yes	-	UL 94
Burning Behav. 5V at thickness h	5VA	class	IEC 60695-11-20
Thickness tested	1.5	mm	IEC 60695-11-20
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

Density	1670	kg/m³	ISO 1183
Water Absorption, Immersion 24h	0.16	%	Sim. to ISO 62

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