

Product Texts**Rynite® FR543 NC010 is a 43% Glass Reinforced, Flame Retardant, Polyethylene Terephthalate**

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	6	cm ³ /10min	ISO 1133
Temperature	280	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.8	%	ISO 294-4, 2577
^[C] Density of melt	1610	kg/m ³	-
^[C] Thermal conductivity of melt	0.3	W/(m K)	-
^[C] Spec. heat capacity of melt	1560	J/(kg K)	-
^[C] Ejection temperature	170	°C	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	17000	MPa	ISO 527
^[C] Stress at break	170	MPa	ISO 527
^[C] Strain at break	1.8	%	ISO 527
Flexural modulus, 23°C	14500	MPa	ISO 178
Flexural modulus	15100	MPa	ISO 178
Flexural modulus temperature	-40	°C	-
^[C] Tensile creep modulus, 1000h	15000	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	43	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	30	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	10	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	10	kJ/m ²	ISO 179/1eA
Rockwell hardness	R 122	-	ISO 2039-2

ASTM Data

Tensile Modulus	16500	MPa	ASTM D 638
Tensile Strength	172	MPa	ASTM D 638
Elongation at Break	1.8	%	ASTM D 638
Compressive Strength	231	MPa	ASTM D 695
Flexural Modulus	14500	MPa	ASTM D 790
Flexural Strength	248	MPa	ASTM D 790
Rockwell Hardness	R 120	-	ASTM D 785
Izod Impact notched, 1/8 in	96	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	91	J/m	ASTM D 256
Temperature	-40	°C	-

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	254	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	90	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	225	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	240	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	225	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	10	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	80	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
Yellow Card available	yes	-	-
^[C] Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.8	mm	-
Yellow Card available	yes	-	-
^[C] Burning Behav. 5V at thickness h	5VA	class	IEC 60695-11-20

Thickness tested	1.5	mm	-
Yellow Card available	yes	-	-
^[C] Oxygen index	35	%	ISO 4589-1/-2
ASTM Data			
UL 94 Flame rating	V-0	-	UL 94
Thickness tested	1.5	mm	-
Coefficient of Thermal Expansion, MD	11	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	79	E-6/K	ASTM D 696
DTUL @ 66 psi	247	°C	ASTM D 648
DTUL @ 264 psi	224	°C	ASTM D 648
Melting Temperature	254	°C	ASTM D 3418
Limiting Oxygen Index	35	%	ASTM D 2863

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4.6	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	4.1	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	368	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	131	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	1E15	Ohm	IEC 62631-3-2
^[C] Electric strength	37	kV/mm	IEC 60243-1
^[C] Comparative tracking index	225	-	IEC 60112
ASTM Data			
Dielectric Strength, Short Time	17	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	0.017	-	ASTM D 150
Dielectric Constant, 1 MHz	4.1	-	ASTM D 150
Surface Resistivity	1E13	Ohm	ASTM D 257
Volume Resistivity	1E15	Ohm*cm	ASTM D 257

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Water absorption	0.6	%	Sim. to ISO 62
^[C] Humidity absorption	0.1	%	Sim. to ISO 62
^[C] Density	1790	kg/m ³	ISO 1183
Water Absorption, 24hr	0.06	%	ASTM D 570
Density	1790	kg/m ³	ASTM D 792

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Delivery form

Pellets, Natural Color

Additives

Release agent, Flame retarding agent

Special Characteristics

Flame retardant, Heat stabilized or stable to heat

Features

Thermal Stability, Weldable

Applications

Electrical and Electronical

Regional Availability

North America, Europe, Asia Pacific, South and Central America