

Product Texts

Common features of Rynite® thermoplastic polyester include mechanical and physical properties such as excellent balance of strength and stiffness, dimensional stability, creep resistance, heat resistance, high surface gloss and good inherent electrical properties at elevated temperature. It can be processed over a broad temperature range and has excellent flow properties.

Rynite® thermoplastic polyester resins are typically used in demanding applications in the automotive, electrical and electronics, appliances where they successfully replace metals and thermosets, as well as other thermoplastic polymers.

Rynite® 530HTE NC010 is a 30% glass reinforced modified polyethylene terephthalate resin with excellent high temperature dielectric properties.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.1	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.6	%	ISO 294-4, 2577
^[C] Density of melt	1360	kg/m ³	-
^[C] Thermal conductivity of melt	0.29	W/(m K)	-
^[C] Spec. heat capacity of melt	1500	J/(kg K)	-
^[C] Ejection temperature	170	°C	-
ASTM Data			
Mold Shrinkage, MD	0.001	mm/mm	ASTM D 955
Mold Shrinkage, TD	0.007	mm/mm	ASTM D 955

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	11000	MPa	ISO 527
^[C] Stress at break	160	MPa	ISO 527
^[C] Strain at break	1.9	%	ISO 527
^[C] Charpy impact strength, +23°C	38	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	10.5	kJ/m ²	ISO 179/1eA
ASTM Data			
Tensile Modulus	10700	MPa	ASTM D 638
Tensile Strength	169	MPa	ASTM D 638
Elongation at Break	2.3	%	ASTM D 638
Compressive Strength	241	MPa	ASTM D 695
Flexural Modulus	8960	MPa	ASTM D 790
Flexural Strength	240	MPa	ASTM D 790
Rockwell Hardness	R 120	-	ASTM D 785
Izod Impact notched, 1/8 in	90	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	85	J/m	ASTM D 256
Temperature	-40	°C	-

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	252	°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	230	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	21	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	63	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.8	mm	-
Yellow Card available	yes	-	-
^[C] Burning rate, FMVSS, Thickness 1 mm	36	mm/min	ISO 3795 (FMVSS 302)
ASTM Data			
UL 94 Flame rating	HB	-	UL 94
Thickness tested	1.5	mm	-

Rynite® 530HTE NC010

PET-GF30

Celanese

DTUL @ 66 psi	251	°C	ASTM D 648
DTUL @ 264 psi	233	°C	ASTM D 648

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4.2	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	3.9	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	14	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	146	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	1E14	Ohm	IEC 62631-3-2
^[C] Electric strength	38	kV/mm	IEC 60243-1
^[C] Comparative tracking index	200	-	IEC 60112
ASTM Data			
Dielectric Strength, Short Time	21.5	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	0.014	-	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] Density	1560	kg/m ³	ISO 1183
Water Absorption, 24hr	0.06	%	ASTM D 570
Density	1580	kg/m ³	ASTM D 792

[C]: CAMPUS

Characteristics**Processing**

Injection Molding

Delivery form

Pellets, Natural Color

Special Characteristics

Heat stabilized or stable to heat

Applications

Electrical and Electronical

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text 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.