

DuPont Performance Polymers Rynite® 830ER NC010 PET

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET) , Polyethylene Terephthalate (PET), 30% Glass Reinforced

Material Notes:

Rynite® 830ER is 30% glass reinforced with excellent high temperature dielectric properties. Class H (180C). Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Rynite-830ER-NC010-PET.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.58 g/cc	1.58 g/cc	ASTM D792
Filler Content	30 %	30 %	
Water Absorption	0.060 %	0.060 %	50%RH,23°C,24h; ASTM D570
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.060 %	0.060 %	Equilibrium 50%RH; ISO 62, Similar to
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	
Linear Mold Shrinkage	0.0013 cm/cm	0.0013 in/in	Flow; ASTM D955
	@Thickness 1.57 mm	@Thickness 0.0618 in	
	0.0015 cm/cm	0.0015 in/in	Flow; ASTM D955
	@Thickness 3.20 mm	@Thickness 0.126 in	
	0.0060 cm/cm	0.0060 in/in	Transverse; ASTM D955
	@Thickness 1.57 mm	@Thickness 0.0618 in	
	0.0070 cm/cm	0.0070 in/in	Transverse; ASTM D955
	@Thickness 3.20 mm	@Thickness 0.126 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	100	100	ASTM D785
Hardness, Rockwell R	120	120	ASTM D785
Tensile Strength at Break	165 MPa	23900 psi	ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength	68.0 MPa	9860 psi	ASTM D638
	@Temperature 150 °C	@Temperature 302 °F	
	107 MPa	15500 psi	

Mechanical Properties	Metric @ Temperature 93.0 °C	English @ Temperature 199 °F	ASTM D638 Comments
	169 MPa @Temperature 23.0 °C	24500 psi @Temperature 73.4 °F	ASTM D638
	193 MPa @Temperature -40.0 °C	28000 psi @Temperature -40.0 °F	ASTM D638
Elongation at Break	2.1 % @Temperature -40.0 °C	2.1 % @Temperature -40.0 °F	ASTM D638
	2.3 % @Temperature 23.0 °C	2.3 % @Temperature 73.4 °F	ASTM D638
	2.3 % @Temperature 23.0 °C	2.3 % @Temperature 73.4 °F	ISO 527
	3.6 % @Temperature 93.0 °C	3.6 % @Temperature 199 °F	ASTM D638
	6.5 % @Temperature 150 °C	6.5 % @Temperature 302 °F	ASTM D638
Tensile Modulus	4.38 GPa @Temperature 150 °C	635 ksi @Temperature 302 °F	ASTM D638
	7.59 GPa @Temperature 93.0 °C	1100 ksi @Temperature 199 °F	ASTM D638
	10.7 GPa @Temperature 23.0 °C	1550 ksi @Temperature 73.4 °F	ASTM D638
	10.7 GPa @Temperature 23.0 °C	1550 ksi @Temperature 73.4 °F	ISO 527
	11.2 GPa @Temperature -40.0 °C	1620 ksi @Temperature -40.0 °F	ASTM D638
Flexural Strength	82.3 MPa @Temperature 150 °C	11900 psi @Temperature 302 °F	ASTM D790
	98.6 MPa @Temperature 93.0 °C	14300 psi @Temperature 199 °F	ASTM D790
	240 MPa @Temperature 23.0 °C	34800 psi @Temperature 73.4 °F	ASTM D790

Mechanical Properties	Metric	English	Comments
	276 MPa	40000 psi	ASTM D790
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Flexural Modulus	2.80 GPa	406 ksi	ASTM D790
	@Temperature 150 °C	@Temperature 302 °F	
	3.99 GPa	579 ksi	ASTM D790
	@Temperature 93.0 °C	@Temperature 199 °F	
	8.96 GPa	1300 ksi	ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	9.66 GPa	1400 ksi	ASTM D790
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Compressive Strength	241 MPa	35000 psi	ASTM D695
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Shear Strength	74.5 MPa	10800 psi	ASTM D732
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched	0.850 J/cm	1.59 ft-lb/in	ASTM D256
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.900 J/cm	1.69 ft-lb/in	ASTM D256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched	6.40 J/cm	12.0 ft-lb/in	ASTM D4812
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	6.95 J/cm	13.0 ft-lb/in	ASTM D4812
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	7.00 J/cm ²	33.3 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	ASTM E 228
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	500 µm/m-°C	278 µin/in-°F	ASTM E 228
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	

Thermal Properties	500 $\mu\text{m}/\text{m}^\circ\text{C}$ Metric	278 $\mu\text{in}/\text{in}^\circ\text{F}$ English	Comments
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	ASTM E 228
CTE, linear, Transverse to Flow	56.0 $\mu\text{m}/\text{m}^\circ\text{C}$	31.1 $\mu\text{in}/\text{in}^\circ\text{F}$	ASTM E 228
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	60.0 $\mu\text{m}/\text{m}^\circ\text{C}$	33.3 $\mu\text{in}/\text{in}^\circ\text{F}$	ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	60.0 $\mu\text{m}/\text{m}^\circ\text{C}$	33.3 $\mu\text{in}/\text{in}^\circ\text{F}$	ASTM E 228
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
Deflection Temperature at 0.46 MPa (66 psi)	90.0 $\mu\text{m}/\text{m}^\circ\text{C}$	50.0 $\mu\text{in}/\text{in}^\circ\text{F}$	ASTM E 228
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
	251 °C	484 °F	ASTM D648
	251 °C	484 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	233 °C	451 °F	ASTM D648

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.00e+17 ohm-cm	1.00e+17 ohm-cm	IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.00e+13 ohm	1.00e+13 ohm	IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dielectric Constant	4.1	4.1	ASTM D150
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
	4.2	4.2	ASTM D150
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	

Electrical Properties	Metric	English	Comments
Dielectric Strength	@Thickness 3.20 mm, Temperature 200 °C	@Thickness 0.126 in, Temperature 392 °F	Short Time; ASTM D149
	19.0 kV/mm	483 kV/in	
	@Thickness 3.20 mm, Temperature 150 °C	@Thickness 0.126 in, Temperature 302 °F	Short Time; ASTM D149
	19.0 kV/mm	483 kV/in	
	@Thickness 3.20 mm, Temperature 95.0 °C	@Thickness 0.126 in, Temperature 203 °F	Short Time; ASTM D149
	21.5 kV/mm	546 kV/in	
	@Thickness 1.57 mm, Temperature 200 °C	@Thickness 0.0618 in, Temperature 392 °F	Short Time; ASTM D149
	21.5 kV/mm	546 kV/in	
	@Thickness 3.20 mm, Temperature 23.0 °C	@Thickness 0.126 in, Temperature 73.4 °F	Short Time; ASTM D149
	23.0 kV/mm	584 kV/in	
@Thickness 1.57 mm, Temperature 95.0 °C	@Thickness 0.0618 in, Temperature 203 °F	Short Time; ASTM D149	
23.5 kV/mm	597 kV/in		
@Thickness 1.57 mm, Temperature 150 °C	@Thickness 0.0618 in, Temperature 302 °F	Short Time; ASTM D149	
25.0 kV/mm	635 kV/in		
@Thickness 1.57 mm, Temperature 23.0 °C	@Thickness 0.0618 in, Temperature 73.4 °F	Short Time; ASTM D149	
Dissipation Factor	0.0040	0.0040	ASTM D150
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	
	0.014	0.014	
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	ASTM D150
Comparative Tracking Index	200 V	200 V	UL 746A
	@Thickness 3.00 mm, Temperature 23.0 °C	@Thickness 0.118 in, Temperature 73.4 °F	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China