

# Politen® ESP185

Polyester Alloy

ITEN INDUSTRIES

Message:

POLITEN® Glass Polyester Sheets are formulated for superior electrical, thermal and mechanical properties.

POLITEN® sheets are used in many applications including the electrical/electronic, marine, automotive and appliance markets. With over 30 years experience in the formulating and the manufacturing of POLITEN® sheets, Iten Industries can offer a high degree of quality, cost effectiveness and engineering services for material and part design.

POLITEN® sheets are formulated and manufactured from fiberglass reinforced thermoset polyester resins. Many grades are recognized by Underwriters Laboratories Inc.® and are formulated to meet NEMA, GPO1, GPO2 and GPO3 specifications. Testing to ASTM, ANSI, Military, NEMA and customer specifications are performed in Iten's laboratories.

POLITEN® sheets are manufactured in many colors and are available in up to 6" thick. Standard sizes are 3' x 6', 4' x 6' and 4' x 8'. Custom sheet sizes, strips and blocks are also available upon request.

General Information		
Filler / Reinforcement	Glass Fiber	
Features	Good Electrical Properties	
	Good Thermal Stability	
Uses	Appliances	
	Automotive Applications	
	Electrical/Electronic Applications	
	Marine Applications	
	Sheet	
Agency Ratings	ANSI Unspecified Rating	
	EC 1907/2006 (REACH)	
	NEMA GPO-1	
	NEMA GPO-2	
	NEMA GPO-3	
RoHS Compliance	RoHS Compliant	
Appearance	Colors Available	
Forms	Sheet	
Mechanical	Nominal Value	Unit
Tensile Strength <sup>1</sup>		
Across Flow : Yield	99.3	MPa
Flow : Yield	113	MPa
Flexural Strength		
-- <sup>2</sup>	210	MPa
-- <sup>3</sup>	222	MPa
Compressive Strength		

-- 4	152	MPa	
-- 5	183	MPa	
Impact	Nominal Value	Unit	
Notched Izod Impact <sup>6</sup>			
Across Flow	970	J/m	
Flow	1000	J/m	
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (In Oil)	17	kV/mm	ASTM D149
Relative Permittivity			
1 MHz <sup>7</sup>	4.40		IEC 60250
1 MHz <sup>8</sup>	4.02		ASTM D150
Dissipation Factor			ASTM D150
1 MHz <sup>9</sup>	0.048		
1 MHz <sup>10</sup>	0.020		
Arc Resistance			ASTM D495
-- 11	132	sec	
-- 12	136	sec	
Dielectric Breakdown			ASTM D149
-- 13	13000	V	
-- 14	63000	V	
NOTE			
1.	Condition A		
2.	Across Flow, Condition A		
3.	Flow, Condition A		
4.	Across Flow, Condition A		
5.	Flow, Condition A		
6.	E48/50		
7.	D24/23		
8.	Condition A		
9.	D24/23		
10.	Condition A		
11.	D48/50		
12.	Condition A		
13.	D48/50		
14.	Condition A		

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