



# FLUOROWRAP®

## Polyimide - Fluoropolymer Composite

Engineered for High Performance Insulation

### Heat Sealable Polyimide - Fluoropolymer Tapes

FLUOROWRAP® polyimide tapes provide excellent electrical, thermal, physical and chemical properties over a wide temperature range in a lightweight package, making them superior for rigorous electrical insulation applications. FLUOROWRAP® polyimide tapes are dimensionally stable, inherently isotropic, physically strong and electrically sound. Saint-Gobain combines polyimide with heat sealable FEP, PFA or PTFE in multiple configurations to function in extreme environments.

#### Features/Benefits

- High temperature electrical insulation
- Dimensionally stable
- Cut-through resistant
- High dielectric strength
- Meets requirements of ASTM D5213 Type II Class A
- Exceeds UL 94 V-0 flammability
- 455 °F (235 °C) Relative Thermal Index (RTI) for both electrical and mechanical properties (UL file E231847)
- RoHS and REACH compliant

#### Availability

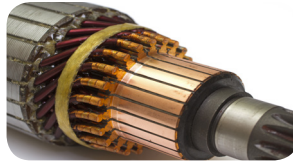
Product	Overall Thickness	Outside	Core	Outside
120FH616	1.2 mil (0.030 mm)	FEP 0.10 mil (0.003 mm)	TH Polyimide 1.0 mil	FEP 0.10 mil (0.003 mm)
150FH019	1.5 mil (0.038 mm)	-	TH Polyimide 1.0 mil	FEP 0.50 mil (0.013 mm)
150PH019	1.5 mil (0.038 mm)	-	TH Polyimide 1.0 mil	PFA 0.50 mil (0.013 mm)
DF2919	2.0 mil (0.051 mm)	PTFE/White Pigment 0.50 mil (0.013 mm)	TH Polyimide 1.0 mil	PTFE/White Pigment 0.50 mil (0.013mm)
DF2919N	2.0 mil (0.051 mm)	PTFE- No Pigment 0.50 mil (0.013 mm)	TH Polyimide 1.0 mil	PTFE - No Pigment 0.50 mil (0.013 mm)

Tape widths available at 0.10" (2.5 mm) and wider. Tapes are available on industry standard 3" (76mm) ID cores in flat-pad, traverse wound and StablEdge™ packages. Split wall cores are available for traverse and StablEdge™ wound products with a standard length of 2-3/4" (70 mm). Roll lengths are dependent upon the width of the product. Heat-sealed splices will be used for longer roll lengths. Customized solutions available.



## Applications

- Wire and Cable for extreme environments
- Magnet wires
- Aircraft power cable
- Electrical submersible pump motors and power cables



## FLUOROWRAP® Polyimide – Fluoropolymer Composite Typical Properties

Performance tests are run using standard test procedures.

The values presented are typical values and should not be used for specification purposes.

Property	120FH616		150FH019				150PH019				DF2919		DF2919N	
	English	Metric	English		Metric		English		Metric		English	Metric	English	Metric
Thickness	1.2 mil	0.030 mm	1.5 mil		0.038 mm		1.5 mil		0.038 mm		2.0 mil	0.051 mm	2.0 mil	0.051 mm
Tolerance (+/-)	0.08 mil	0.002 mm	0.25 mil		0.006 mm		0.30 mil		0.008 mm		0.20 mil	0.005 mm	0.20 mil	0.005 mm
Weight	1.39 oz/yd <sup>2</sup>	47.13 g/m <sup>2</sup>	1.87 oz/yd <sup>2</sup>		63.40 g/m <sup>2</sup>		1.9 oz/yd <sup>2</sup>		64.42 g/m <sup>2</sup>		2.93 oz/yd <sup>2</sup>		99.50 g/m <sup>2</sup>	
Density	1.573 g/cm <sup>3</sup>		1.687 g/cm <sup>3</sup>				1.687 g/cm <sup>3</sup>				1.75 g/cm <sup>3</sup>		1.95 g/cm <sup>3</sup>	
Tensile Strength (minimum)	30 kpsi	207 MPa	24 kpsi		165 MPa		24 kpsi		165 MPa		12 kpsi	83 MPa	12 kpsi	83 MPa
Elongation (minimum)	85 %		85 %				85 %				40 %		40 %	
Shrinkage	<0.05 %		<0.05 %				<0.05 %				<0.05 %		<0.05 %	
Moisture Absorption	<2.0 %		<2.0 %				<2.0 %				<2.0 %		<2.0 %	
Dielectric Strength	7,000 volts/mil	275 kV/mm	5,500 volts/mil		217 kV/mm		5,500 volts/mil		217 kV/mm		3,500 volts/mil	138 kV/mm	3,500 volts/mil	138 kV/mm
Heat Seal Strength	2.5 lb/in FEP-FEP	45 g/mm FEP-FEP	2.5 lb/in FEP-FEP	2.0 lb/in FEP-PI	45 g/mm FEP-FEP	36 g/mm FEP-PI	1.5 lb/in PFA-PFA	1.0 lb/in PFA-PI	27 g/mm PFA-PFA	18 g/mm PFA-PI	2.5 lb/in FEP-FEP	45 g/mm FEP-FEP	2.5 lb/in FEP-FEP	45 g/mm FEP-FEP
Continuous Service Temperature	400°F	205°C	400°F		205°C		500°F		260°C		500°F	260°C	500°F	260°C

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