

PTFE-25%GF refers to a composite material consisting of polytetrafluoroethylene (PTFE) filled with 25% glass fibers. The addition of glass fibers enhances the mechanical properties of PTFE, improving its strength, stiffness, and dimensional stability. PTFE-25%GF offers increased tensile strength, improved wear resistance, and reduced creep compared to unfilled PTFE.

**Chemical Description**

Description	Value
Material Type	Semi-Crystalline Thermoplastic Fluoropolymer
Chemical Name	PTFE Polytetrafluoroethylene
Additives	25% Glass Filled
Color	Off White
UV Resistant	Yes

**Physical Properties**

Property	Maximum Unless Range is Specified
Density,lbs/in <sup>3</sup>	0.081
Water Absorption, 24 hrs, Immersion,% by wt.	0.02
Coefficient of Linear Thermal Expansion, x10 <sup>-5</sup> in./in./°F	6.4
Heat Deflection Temp,°F at 263psi	150
Melting Point Temp,°F	635
Max Continuous Operating Temp,°F	500
Minimum Operating Temp,°F	-328
Flammability Rating,UL94	V-0
Dielectric Constant at 1 MHz	2.4
Thermal Conductivity,BTU-in/ft <sup>2</sup> -hr-°F	3.1

**Mechanical Properties**

Property	Maximum Unless Range is Specified
Tensile Strength,ksi	2.1
Compressive Strength,ksi	1.0
Compressive Modulus,ksi	110
Flexural Strength,ksi	1.95
Flexural Modulus,ksi	190
Elongation at Break	270%
Hardness Shore D	50
Notched Izod Impact Strength,ft-lb/in	3.5

The material properties in this datasheet are provided by one of the manufacturers collaborating with Naxtry. Please note that material properties may slightly vary among different manufacturers. Naxtry can accommodate customer requests for specific materials or brands.