Virgin PTFE - Technical Data Sheet

Chemical Designation
PTFE (Polytetrafluoroethylene)

Material Type
Virgin / Unfilled PTFE

Typical Color
Natural white

Tested Sample
Virgin PTFE sheet

Main features
-> high chemical resistance
-> low friction and non-stick behavior
-> broad temperature performance
-> excellent electrical insulation
-> very low moisture absorption
-> clean, unfilled PTFE material

Typical applications
-> chemical processing seals and gaskets
-> valve, pump and fluid-handling parts
-> electrical insulation components
-> semiconductor and clean-process parts
-> low-friction guides, rings and bushings
-> custom CNC machined PTFE components

Available forms	description
PTFE Sheets	Molded or skived sheet forms for machining, fabrication and lining.
PTFE Rods	Round stock for turning rings, bushings, sleeves and custom components.
PTFE Tubing	Tubing for fluid handling, insulation and equipment assemblies.
PTFE Films	Thin PTFE material for insulation, release and barrier applications.
Custom PTFE Parts	CNC machined parts produced from drawings, dimensions or samples.

Third-party test results	result	unit / rating	test method
Density	2.225	g/cm³	ISO 1183-1:2019
Shore D hardness	61	Shore D	ISO 6507-1:2018 / ISO 2039-2
Dielectric breakdown strength	15.07	kV/mm	IEC 243-1:1990
Acid resistance (24 h)	No visible corrosion	Pass	ISO 4433-1:1997
Alkali resistance (24 h)	No visible corrosion	Pass	ISO 4433-1:1997
High-temperature resistance	260	°C	ISO 18096:2013
Pressure resistance	6.4	MPa	ISO 811:2018
Flammability	V0	Rating	ISO 1210:1996
Tensile strength	38.36	MPa	ISO 527-1:2012

Test source: Changzhou Ruina Material Inspection Service Co., Ltd., Report No. RN250220224. Testing performed on a Golden Collar virgin PTFE sheet sample received 2025-02-20; report issued 2025-02-26.

Technical disclaimer

The results above apply to the specific Virgin PTFE sheet sample submitted for third-party testing. Actual properties may vary with resin grade, product form, dimensions, processing conditions, test methods and application environment. This sheet is for material selection and comparison only and does not constitute guaranteed properties or contractual specifications. Confirm final specifications, tolerances, compliance documentation and performance requirements with Golden Collar before use or purchase.