



KINTEK

## Sealing O-Rings, Gaskets & Thread Seal Tapes Catalog

Contact us for more catalogs of PTFE(Teflon) Products, Sample Preparation & Filtration, Reaction & Synthesis Equipment, High-Purity & Trace Analysis, Custom Machining Services, General Consumables & Seals, Electrochemistry & New Energy Testing, Basic Labware & Containers, Fluid Transfer, Tubing & Valves, etc.

# **KINTEK**

## **COMPANY PROFILE**

### **>>> About Us**

From everyday basic labware (beakers, measuring cylinders, crucibles, dishes, reagent/wash bottles, centrifuge and digestion tubes), high-purity trace analysis instruments, and cleaning/storage tanks, to comprehensive fluid transfer components (tubing, fittings, valves), sample prep and filtration tools (separatory funnels, burettes, filters, pipettes, tweezers, spatulas), and general consumables (stirring bars, O-rings, gaskets, seal tapes, caps, septa), extending all the way to advanced derivative and reaction apparatus like standard or custom electrochemical cells, battery testing fixtures, electrode accessories, hydrothermal synthesis liners, microwave digestion vessels, microchannel reactors, and condensation/reflux devices, KINTEK manufactures virtually all imaginable laboratory supplies crafted from PTFE and PFA. Backed by end-to-end custom CNC fabrication, we are equipped to deliver absolutely everything from complex non-standard machined parts and bespoke laboratory setups to high-volume orders, maintaining an exclusive and absolute focus on high-performance fluoropolymer materials.



# Custom Ptfе Insulating Gaskets Corrosion Resistant Teflon Seals Tailored Engineering Plastic Components

Item Number: PL-CP125



## Introduction

Procure high-performance custom PTFE insulating gaskets engineered for extreme chemical resistance and electrical isolation. Our bespoke Teflon seals provide unmatched durability and aging resistance across diverse industrial applications. Request your precision-machined, fully customizable fluoropolymer components today for reliable sealing.

[Learn More](#)

Application	Description	Key Benefit
Chemical Processing	Sealing flanged joints in piping systems carrying hot nitric or sulfuric acids.	Total corrosion resistance prevents hazardous leaks and environmental contamination.
Semiconductor Tools	Insulating and sealing components within wafer etching and cleaning equipment.	High purity prevents metal ion contamination in ultra-clean environments.
Laboratory Apparatus	Custom gaskets for high-pressure hydrothermal synthesis reactors and digestion vessels.	Maintains seal integrity under combined high heat and aggressive chemical vapor.
Power Electronics	Dielectric spacers and insulating plugs for high-voltage transformers and switchgear.	Exceptional electrical resistance prevents short circuits and improves safety.
Aerospace Systems	Fuel system seals and cryogenic fluid insulators for specialized flight hardware.	Remains flexible and functional at liquid nitrogen temperatures without becoming brittle.
Pharmaceutical Manufacturing	Gaskets for sanitary valves and fluid transfer lines in sterile processing environments.	FDA-compliant material ensures no leaching or interaction with active ingredients.
Oil & Gas Exploration	Sealing components for downhole tools exposed to sour gas (H <sub>2</sub> S) and high-pressure steam.	Resistant to rapid gas decompression and chemical degradation in harsh wells.
Food & Beverage	Non-stick seals for high-temperature ovens and acidic liquid filling stations.	Non-toxic and easy-to-clean surface meets stringent hygiene and safety standards.

Feature	Specification Detail for PL-CP125 Series
Model Identifier	PL-CP125 (Custom Configured)
Base Material	Virgin PTFE / Modified PTFE / PFA
Geometry Type	Flat Gaskets, Envelope Gaskets, Insulating Plugs, Custom Bushings
Standard Compliance	Manufactured to DIN, ANSI, JIS, or Custom CAD drawings
Temperature Range	-200°C to +260°C (-328°F to +500°F)
Dielectric Strength	18-80 kV/mm (depending on thickness and grade)
Tensile Strength	20-35 MPa
Elongation at Break	200% - 400%
Chemical Resistance	Universal (except molten alkali metals and fluorine gas)

Application	Description	Key Benefit
Feature	Specification Detail for PL-CP125 Series	
<b>Water Absorption</b>	< 0.01%	
<b>Surface Finish</b>	Precision machined (Ra 0.4 - 1.6 $\mu\text{m}$ typical)	
<b>Customization Options</b>	Thickness, OD/ID, Bolt Hole Patterns, Step Features, Tapered Profiles	

# Custom Ptfе Insulating Gaskets And Corrosion Resistant Fluoropolymer Seals For Industrial Electrical Applications

Item Number: PL-CP299



## Introduction

Premium custom PTFE insulating gaskets offer exceptional corrosion resistance, superior dielectric strength, and wide temperature stability. Ideal for demanding industrial environments, these anti-aging fluoropolymer components ensure reliable electrical isolation and long-term sealing performance in extreme conditions for procurement.

[Learn More](#)

Application	Description	Key Benefit
Semiconductor Processing	Insulating components for etch and deposition chambers where high-purity gas handling is critical.	Zero contamination and resistance to plasma etching gases.
Electrochemical Cells	Custom gaskets and plugs used to isolate electrodes and prevent short-circuiting in electrolyte baths.	Total resistance to acidic and alkaline electrolytes.
High-Voltage Substations	Specialized insulating spacers and bushings for power distribution hardware exposed to the elements.	Exceptional UV resistance and dielectric reliability.
Chemical Fluid Handling	Seals and gaskets for piping systems transporting aqua regia, hydrofluoric acid, or hot caustic soda.	Prevents leaks and prevents the corrosion of metal flanges.
Aerospace Instrumentation	Insulating ferrules for sensors and wiring harnesses in extreme high-altitude or vacuum conditions.	Low outgassing and stable performance at temperature extremes.
Pharmaceutical Synthesis	Non-reactive sealing for reaction vessels and filtration units where batch purity is essential.	FDA-compliant material with non-stick, easy-clean surfaces.
Cryogenic Engineering	Seals and insulators for liquid nitrogen or liquefied natural gas (LNG) handling systems.	Maintains flexibility and sealing integrity at -200°C.
Analytical Labware	Custom-machined plugs and adapters for high-pressure digestion vessels and reflux devices.	High pressure-bearing capability and thermal stability.

Parameter	Specification Detail for PL-CP299
Product Identifier	PL-CP299 Custom PTFE/PFA Series
Material Composition	Virgin PTFE, Modified PTFE, or PFA (Application Dependent)
Manufacturing Process	Precision CNC Machining / Lathe Turning
Dimensional Tolerances	Customizable to +/- 0.01mm based on client drawings
Temperature Range	-200°C to +260°C (-328°F to +500°F)
Dielectric Strength	18-22 kV/mm (Typical for custom thickness)
Chemical Compatibility	Universal (Except molten alkali metals and elemental fluorine)
Surface Finish	Ra 0.4µm - 1.6µm (Customizable)

Application	Description	Key Benefit
Parameter	Specification Detail for PL-CP299	
Water Absorption	< 0.01% (ASTM D570)	
Flammability Rating	UL 94 V-0 (Self-extinguishing)	
Custom Options	Sizes, shapes, holes, threads, and edge profiles are fully bespoke	

# Customizable High Temperature Resistant Anti Static Ptfе Insulating Gaskets Flame Retardant Corrosion Proof Industrial Seals

Item Number: PL-CP286



## Introduction

Optimize your industrial sealing with our high-temperature resistant and anti-static PTFE insulating gaskets. Engineered for extreme chemical environments, these flame-retardant seals offer customizable dimensions to meet rigorous procurement specifications for demanding fluid handling and critical laboratory applications globally available now.

[Learn More](#)

Application	Description	Key Benefit
Semiconductor Fabrication	Used in wafer cleaning and etching equipment where high-purity chemicals and anti-static safety are paramount.	Prevents contamination and ESD damage to sensitive silicon wafers.
Chemical Processing	Seals for glass-lined reactors, flanged piping, and storage tanks handling aggressive acids or bases.	Eliminates leak paths and resists chemical attack for extended service life.
Pharmaceutical Manufacturing	Integrated into cleanroom fluid transfer systems and synthesis reactors requiring FDA-compliant materials.	Ensures zero leaching and maintains sterile process integrity.
Power Distribution	Provides insulating spacers and seals in high-voltage transformers and electrical enclosures.	High dielectric strength prevents electrical arcing and short circuits.
Laboratory Instrumentation	Specialized gaskets for high-pressure digestion vessels and electrochemical cells.	Maintains a leak-proof seal under extreme thermal and chemical stress.
Cryogenic Engineering	Sealing components for liquid nitrogen and oxygen handling systems in aerospace and research.	Remains ductile and effective at ultra-low temperatures without becoming brittle.
Oil and Gas Refineries	Critical seals in flammable gas transport lines where anti-static properties are a safety mandate.	Mitigates the risk of static-induced ignition in hazardous zones.

Attribute	Detailed Specification for PL-CP286
Model Identifier	PL-CP286
Primary Material	High-Purity Polytetrafluoroethylene (PTFE)
Additives	Anti-static / Electrostatic Dissipative (ESD) Agents
Temperature Range	Customizable based on grade (Standard -200°C to +260°C)
Dielectric Strength	>18 kV/mm (Insulating Grade)
Surface Resistivity	Customizable to Anti-static or Insulating requirements
Chemical Resistance	Full resistance to nearly all acids, alkalis, and organic solvents
Flame Retardancy	UL 94 V-0 Equivalent
Water Absorption	<0.01%

Application	Description	Key Benefit
Attribute	Detailed Specification for PL-CP286	
<b>Coefficient of Friction</b>	0.05 to 0.10	
<b>Tensile Strength</b>	Customizable to application requirements	
<b>Internal Diameter (ID)</b>	Fully Customizable (CNC Machined)	
<b>Outer Diameter (OD)</b>	Fully Customizable (CNC Machined)	
<b>Thickness Range</b>	Fully Customizable (CNC Machined)	
<b>Surface Finish</b>	Smooth, non-porous, and high-precision finish	
<b>Compliance</b>	Industrial standard material certifications available upon request	



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