

Custom Ptfе Corrosion Resistant White Syringe With Threaded Luer Connector Compatibility

Item Number: PL-CP317



Introduction

Procure custom PTFE syringes designed for extreme chemical resistance. These high-purity white fluoropolymer injectors feature threaded Luer connections for secure fluid transfer in demanding laboratory environments. Contact us for bespoke dimensions and specialized high-performance CNC-machined laboratory equipment solutions today.

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Application	Description	Key Benefit
Trace Element Analysis	Handling of ultrapure mineral acids (HCl, HNO ₃) for ICP-MS and ICP-OES sample preparation.	Eliminates background contamination from leachable plastics or glass.
Semiconductor Etching	Precision delivery of hydrofluoric acid and buffered oxide etchants in wafer cleaning processes.	Complete resistance to fluorine-based chemistry that destroys other materials.
Pharmaceutical Synthesis	Dosing of volatile organic solvents and aggressive catalysts during active pharmaceutical ingredient (API) development.	Prevents chemical degradation of the injector and protects the purity of the synthesis.
Electrochemical Research	Injecting electrolyte solutions into custom-built electrochemical cells and battery test fixtures.	High dielectric strength and chemical stability ensure no interference with electrical readings.
Pilot Plant Sampling	Extraction of high-temperature or corrosive samples from industrial process lines for quality control.	Ensures operator safety and sample integrity in harsh industrial environments.
Microfluidics Interface	Acting as a high-pressure reservoir for microfluidic chips requiring precise, non-reactive fluid input.	The threaded Luer connection provides a stable, leak-proof interface with specialized tubing.
Aerospace Materials Testing	Dispensing of specialized fuels, oxidizers, or hydraulic fluids in controlled testing environments.	Reliable performance under extreme chemical and thermal stress conditions.
Fine Chemical Production	Batch-wise addition of concentrated bases or acids in small-scale reactor systems.	Precision control over fluid volume combined with total material compatibility.

Specification	Detail for PL-CP317
Model Identifier	PL-CP317
Material Composition	100% Virgin PTFE (Polytetrafluoroethylene)
Color Appearance	Opaque White
Manufacturing Process	High-Precision Custom CNC Machined
Connection Interface	Integrated Threaded Luer-Lock (Custom threads available)
Volumetric Capacity	Fully Customizable (Commonly 1mL to 500mL range)
Dimensional Tolerance	Custom specified (Standard CNC tolerances ±0.05mm)
Temperature Range	-200°C to +260°C (-328°F to +500°F)

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Chemical Resistance	Universal (Except molten alkali metals and elemental fluorine)	
Lubrication Requirement	None (Self-lubricating material properties)	
Plunger Type	Solid PTFE or Reinforced Core (Customizable)	
Sterilization Compatibility	Autoclavable, Ethylene Oxide (EtO), or Chemical Cold Soak	