High Purity Ptfe Syringe Sampling Barrel Customizable Corrosion Resistant Teflon Labware

Item Number: PL-CP59

Introduction

Precision engineered PTFE sampling syringes provide absolute chemical inertness and ultra low background levels for critical trace analysis applications featuring fully customizable dimensions and volumes to meet specific laboratory or industrial process requirements for aggressive fluid handling.

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Application	Description	Key Benefit
Trace Metal Analysis	Sampling of ultra-pure acids and reagents for ICP-OES and ICP-MS analysis in geochemistry and environmental labs.	Eliminates metallic contamination from the sampling vessel.
Semiconductor Processing	Handling of wet etching chemicals and high-purity solvents used in wafer fabrication and cleaning processes.	Resists aggressive HF and prevents particulate generation.
Pharmaceutical Synthesis	Precision dosing of reactive intermediates and catalysts in sterile or chemically sensitive drug development.	FDA-compliant material with zero leachables for purity.
Battery Research	Transferring corrosive electrolytes and lithium-ion battery components during cell assembly and testing.	Chemical resistance to highly reactive electrolyte salts.
Cryogenic Sampling	Volumetric measurement and transfer of liquefied gases or samples stored at ultra-low temperatures.	Maintains ductility and sealing at cryogenic levels.
Petrochemical Testing	Analysis of high-temperature oil samples and corrosive additives in refinery quality control laboratories.	High thermal resistance and broad solvent compatibility.
Automated Liquid Handling	Integration as a high-durability syringe component within custom robotic sampling or titration platforms.	Reduces maintenance downtime due to low-wear surfaces.
Environmental Monitoring	Collection of field samples from contaminated sites involving unknown or highly acidic industrial runoff.	Ensures sample integrity regardless of the chemical matrix.

Feature	Specification Details (Model PL-CP59)
Model Identifier	PL-CP59
Primary Material	High-Purity Virgin PTFE (Polytetrafluoroethylene)
Nominal Volume	10ml (Standard) / Fully Customizable upon request
Fabrication Method	Precision CNC Machined from solid fluoropolymer stock
Operating Temperature	-200°C to +260°C (-328°F to +500°F)
Chemical Compatibility	Universal (All acids, bases, solvents, and oxidizers)
Surface Finish	Smooth, low-porosity machined surface
Background Level	Ultra-low trace element background suitable for PPT-level analysis
Connection Ports	Customizable (Options include Luer-Lock, NPT threads, or Plain Tip)

Application	Description	Key Benefit
Feature	**Specification Details (Model PL-CP59)**	
Dimensions	Custom-to-Order (Internal Diameter, Outer Diameter, and Stroke Length)	
Seal Type	Precision-machined PTFE-to-PTFE interference seal	
Autoclavability	Fully autoclavable and sterilizable for biological applications	