Corrosion Resistant High Purity Pfa Syringe Translucent Chemical Sampling Tool

Item Number: PL-CP411

Introduction

Engineered for trace analysis, this high-purity PFA syringe offers exceptional chemical resistance and thermal stability. Its translucent design ensures precise fluid measurement while preventing contamination in semiconductor and electrochemical research environments where material integrity is critical for success.

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Application	Description	Key Benefit
Semiconductor Manufacturing	Handling and dispensing ultra-pure etching chemicals and photoresists during wafer processing.	Prevents trace metal contamination which could cause device failure.
Electrochemical Research	Precise injection of electrolytes into custom battery testing fixtures and cells.	Maintains stable electrolyte concentration and eliminates liquid level fluctuations.
Trace Metal Analysis	Preparation and transfer of samples for ICP-MS and other high-sensitivity analytical techniques.	Eliminates leaching and ion exchange from the container walls.
Pharmaceutical Synthesis	Transfer of reactive intermediates and aggressive organic solvents in drug discovery labs.	Ensures material integrity when exposed to complex solvent mixtures.
Geochemical Sampling	Collection and titration of mineral samples using concentrated acids like HF or HNO3.	Superior corrosion resistance compared to glass or standard plastics.
Hydrothermal Synthesis	Managing fluid volumes in high-temperature and high-pressure reaction liners.	High thermal stability prevents deformation at elevated temperatures.
Microfluidic Feed	Acting as a primary reservoir for micro-channel reactors requiring chemical resistance.	Smooth internal surfaces ensure laminar flow and no particle shedding.
Environmental Testing	Sampling of contaminated water sources containing high concentrations of salts or volatile organics.	Inert surface prevents the loss of volatile compounds to the syringe walls.

Parameter	Specification Details for PL-CP411
Product Model Identifier	PL-CP411 Series
Material Composition	High-Purity Perfluoroalkoxy (PFA) / PTFE Optional
Nominal Capacity	10ml (Custom volumes available)
Thermal Operating Range	-200°C to +260°C
Chemical Resistance	Universal resistance (Acids, Bases, Solvents, HF)
Transparency	Translucent / Semi-transparent for visual monitoring
Manufacturing Process	Precision CNC Machined / Injection Molded Options
Surface Finish	Ultra-smooth, non-stick surface to prevent residue
Purity Grade	Trace analysis grade, low extractables

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Parameter	**Specification Details for PL-CP411**	
Customization Options	Dimensions, needle interface, and plunger design are fully customizable	
Biological Safety	Non-toxic, biocompatible, and non-reactive	