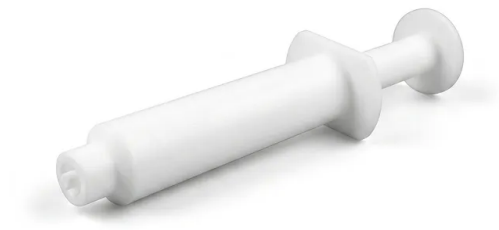


High Purity 25ml PTFE Syringe For Trace Analysis And Automated Syringe Pump Systems

Item Number: PL-CP0101



Introduction

Precision-engineered 25ml PTFE syringe crafted from high-purity virgin resin. Designed for extreme chemical resistance and seamless integration with automated syringe pumps and FEP extension tubing in demanding B2B laboratory and industrial fluid transfer applications.

[Learn More](#)

Application	Description	Key Benefit
Trace Metal Analysis	Handling high-purity acids (HF, HNO ₃) for sample preparation in ICP-MS and ICP-OES workflows.	Eliminates ion leaching and contamination.
Semiconductor Processing	Dispensing photoresists and etching chemicals in cleanroom environments where purity is critical.	High resistance to aggressive surfactants and solvents.
Pharmaceutical Synthesis	Precise delivery of reactive intermediates and anhydrous solvents in closed-loop systems.	Maintenance-free operation with reactive reagents.
Battery Research	Transferring lithium-ion battery electrolytes which are highly sensitive to moisture and contamination.	Hermetic sealing and total chemical resistance.
Petrochemical Testing	Sampling and testing of crude oil derivatives and caustic refining chemicals at elevated temperatures.	High thermal stability and structural robustness.
Microfluidic Feed	Serving as the primary reservoir for microfluidic chips requiring constant, pulse-free flow rates.	Low friction plunger for smooth, precise delivery.
Environmental Monitoring	Collecting and processing wastewater or soil extract samples containing volatile organic compounds (VOCs).	Non-stick surface prevents sample carryover.

Attribute	Detailed Specification	Reference Value
Model Identifier	Site-Facing Reference Code	PL-CP0101
Primary Material	Fluoropolymer Grade	High-Purity Virgin PTFE
Nominal Volume	Standard Internal Capacity	25ml (Customizable)
Specific Gravity	Material Density	2.10 - 2.20 g/cc
Melting Point	Thermal Degradation Point	327°C (621°F)
Heat Deflection Temp	66 psi Load Rating	120°C (248°F)
Shore Hardness	Surface Rigidity	55D (Shore Scale)
Coefficient of Friction	Dynamic Sliding Resistance	0.110
Tensile Strength	Ultimate Material Strength	2,990 - 4,970 psi
Flexural Strength	Bending Resistance	2,490 psi
Water Absorption	24-Hour Immersion Test	0.01%
Dielectric Constant	Insulating Performance	2.1
Tubing Interface	Connection Type	Compatible with FEP/PFA Tubing

Application	Description	Key Benefit
Attribute	Detailed Specification	Reference Value
Customization	Bespoke Fabrication	Fully Customizable Dimensions & Fittings