High Purity Ptfe Reagent Storage Bottle Chemical Resistant Teflon Plastic Low Background Virgin Material Vessel

Item Number: PL-CP230

Introduction

Engineered from virgin high-purity PTFE, this reagent storage bottle provides exceptional chemical resistance and low background levels for trace analysis. Ideal for aggressive solvents and corrosive acids, ensuring secure containment in demanding industrial and laboratory applications.

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Application	Description	Key Benefit
Trace Metal Analysis	Storage of high-purity mineral acids (HNO3, HCl, HF) used in ICP-MS and ICP-OES sample preparation.	Minimal leachable metals ensure accurate detection limits.
Semiconductor Processing	Containment of ultra-pure etching chemicals and photoresists used in wafer fabrication.	Prevents ionic contamination and maintains chemical potency.
Pharmaceutical Research	Storage of active pharmaceutical ingredients (APIs) and reactive intermediates during drug synthesis.	Inert surface prevents degradation or reaction with the container.
Cryogenic Storage	Safe containment of samples and reagents in liquid nitrogen or extreme cold-storage environments.	Remains ductile and crack-resistant at sub-zero temperatures.
Battery Material Testing	Handling of corrosive electrolytes and lithium-ion battery precursors during electrochemical research.	High resistance to reactive salts and organic carbonates.
Petrochemical Sampling	Collection and transport of volatile organic compounds and aggressive hydrocarbons from field sites.	Prevents sample loss through permeation or container reaction.
High-Temp Synthesis	Serving as a liner or vessel for chemical reactions involving reflux or pressurized heating cycles.	Withstands continuous heat without deforming or releasing toxins.

Parameter	Specification Details for PL-CP230 Series
Product Item Number	PL-CP230
Material Composition	100% Virgin PTFE (Polytetrafluoroethylene)
Standard Capacity Range	Customizable (including 150ml, 250ml, 500ml, and bespoke volumes)
Operating Temperature	-200°C to +260°C (-328°F to +500°F)
Chemical Resistance	Excellent (Universal resistance except for molten alkali metals and fluorine)
Coefficient of Friction	0.05 to 0.10 (Extremely low)
Water Absorption	<0.01% (ASTM D570)
Surface Finish	Smooth, non-porous CNC-machined internal and external surfaces
Closure Type	Precision-threaded PTFE screw cap (Custom thread patterns available)
Wall Thickness	Standard heavy-wall or customized to specific pressure requirements
Dimensions	Fully customizable via CNC fabrication based on user blueprints

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Parameter	**Specification Details for PL-CP230 Series**	
Color	Opaque White (Natural PTFE)	
Compliance	FDA compliant material for food and pharmaceutical contact	