

# High Purity Pfa Reaction Vessel For Biopharmaceutical Synthesis And Corrosive Chemical Fluid Handling With Customizable Tube Fittings

Item Number: PL-CP331



## Introduction

Engineered for biopharmaceutical and trace analysis applications, this high-purity PFA reaction vessel offers exceptional corrosion resistance and thermal stability. Featuring customizable fittings for seamless fluid transfer, it ensures zero contamination and reliable performance in demanding industrial laboratory process environments.

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Application	Description	Key Benefit
Biopharmaceutical Synthesis	Preparation and storage of high-purity buffers and active pharmaceutical ingredients (APIs).	Prevents leaching of impurities, ensuring compliance with strict regulatory standards.
Semiconductor Etching	Handling and storage of aggressive etching reagents used in wafer fabrication and cleaning.	Exceptional resistance to HF and other corrosive chemicals used in microelectronics.
Trace Metal Analysis	Acid digestion and sample preparation for ICP-MS and other sensitive analytical techniques.	Eliminates background contamination from metal ions, improving detection limits.
Fine Chemical Production	Synthesis of specialty chemicals that require high-temperature stability and inert environments.	Maintains product purity and provides a durable alternative to expensive alloy vessels.
Petroleum Wastewater Testing	Storage and analysis of complex wastewater samples containing oils, acids, and organic solvents.	Prevents container corrosion and ensures the accuracy of environmental monitoring data.
Electrochemical Research	Use as a reservoir or reaction cell for specialized electrochemical testing and battery development.	Chemical inertness ensures that the vessel does not interfere with electrochemical reactions.
Laboratory Scale-Up	Transitioning chemical processes from small-scale beakers to larger 4L or 6L batch volumes.	Provides a scalable, reliable platform that mirrors the purity of smaller lab-scale vessels.

Feature	Specification Details (PL-CP331 Series)
Model Identification	PL-CP331
Available Nominal Capacities	4000 mL (4L) / 6000 mL (6L)
Material Construction	Ultra-High Purity PFA (Perfluoroalkoxy)
Fabrication Method	Precision CNC Machining / Custom Molding
Port Configurations	Fully Customizable (e.g., 1/4", 3/8", 1/2" Tubing Connectors)
Fittings Compatibility	Compression Fittings, NPT Threads, Flanged Connectors
Operating Temperature Range	-200°C to +260°C
Chemical Resistance	Universal (Includes HF, Aqua Regia, Strong Alkalis)

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Surface Finish	High-Purity Smooth Finish, Non-Stick	
Wall Thickness	Customizable based on pressure and application requirements	
Lid Design	Screw-top or Flanged with customizable port entry points	
Purity Grade	Trace Analysis / Semiconductor Grade	