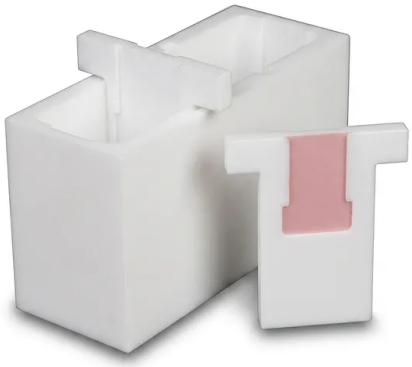
High Purity Custom Ptfe Laboratory Reaction Tank With Baffles For Low Background Trace Analysis

Item Number: PL-CP272



Introduction

Engineered for high-purity trace analysis, this custom PTFE reaction tank features a low background design and optional baffles. Precision CNC-machined for extreme chemical resistance and thermal stability, it delivers reliable performance in the most demanding laboratory and industrial applications.

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Application	Description	Key Benefit
Trace Metal Analysis	Preparation and digestion of samples for ICP-OES and ICP-MS analysis in environmental and geological labs.	Lowest possible detection limits due to high-purity, low-leachable material.
Semiconductor Etching	Handling of high-purity etching solutions and cleaning of silicon wafers or sensitive electronic components.	Zero ionic contamination and resistance to aggressive HF-based etchants.
Electrochemical Research	Custom-designed cells for monitoring valence states and coordination environments during battery testing.	Chemical inertness ensures the purity of electrolytes and reaction gases.
Pharmaceutical Synthesis	Batch reactions involving corrosive reagents or catalysts that require high-purity environments.	Non-stick surface prevents product adhesion and simplifies cleaning protocols.
Fuel Cell Testing	Storage and delivery of reaction gases and liquids within fuel cell experimental setups.	Low permeability and anti-adsorption properties guarantee gas purity.
Hydrothermal Synthesis	Lining material for high-pressure reaction vessels used in the creation of advanced nanomaterials.	Excellent thermal resistance and pressure stability under harsh conditions.
Aggressive Storage	Long-term containment of concentrated acids, bases, and volatile organic compounds (VOCs).	Superior sealing performance and resistance to environmental degradation.
Sample Fractionation	Use of baffled tanks for the separation and filtration of complex chemical mixtures.	Enhanced mixing efficiency and precise separation of distinct chemical phases.

Parameter	PL-CP272 Specification Details
Model Identifier	PL-CP272
Material Construction	High-Purity Virgin PTFE (Polytetrafluoroethylene)
Manufacturing Method	High-precision CNC Machined from Solid Rod/Block
Customization Options	Fully Customizable Dimensions and Geometries
Internal Features	Customizable Baffles, Dividers, and Separators
Operating Temperature	-200°C to +260°C (-328°F to +500°F)
Chemical Compatibility	Universal (Except molten alkali metals and elemental fluorine)
Surface Finish	Ultra-smooth, low-porosity CNC finish

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Parameter	**PL-CP272 Specification Details**	
Blank Value Performance	Optimized for Ultra-trace Analysis (Low PPT levels)	
Lid/Closure Design	Bespoke configurations available (Threaded, Flanged, or Push-fit)	
Wall Thickness	Customizable based on pressure and thermal requirements	
Port Integration	Optional NPT, Flanged, or Custom ports for sensors/tubing	