Custom Ptfe Square Tank Semiconductor Soaking Cleaning Acid Resistant Fluoropolymer Filtration Vessel

Item Number: PL-CP53

Introduction

Maximize efficiency in semiconductor fabrication with our custom PTFE square tanks, engineered for superior acid resistance and trace analysis purity. These high-performance fluoropolymer vessels ensure contaminant-free soaking and reliable chemical handling for demanding laboratory and industrial processes today.

Learn More

Application	Description	Key Benefit
Semiconductor Wafer Etching	Immersion of silicon wafers in concentrated acid baths for surface modification and contaminant removal.	Prevents metallic ion contamination and resists aggressive HF/HNO3 mixtures.
Solar Cell Processing	Texturing and cleaning of silicon substrates in large-scale photovoltaic manufacturing lines.	High-volume durability and resistance to alkaline etching solutions.
Trace Analysis Sample Prep	Acid digestion and soaking of laboratory labware to ensure a baseline of zero contamination.	Ultra-low leaching profile essential for PPT-level detection limits.
Precious Metal Recovery	Usage as a reaction or soaking vessel for the dissolution of metals in aqua regia or cyanide solutions.	Total immunity to oxidative attack and high-temperature stability.
Aerospace Component Cleaning	De-greasing and de-scaling of high-precision engine components using corrosive chemical agents.	Long-term reliability in harsh industrial environments with heavy duty cycles.
Pharmaceutical Chemical Synthesis	Serving as a primary vessel for the handling of corrosive reagents in high-purity drug manufacturing.	FDA compliance and ease of sterilization due to non-stick surface.
Battery Research and Testing	Soaking of electrode materials in electrolyte solutions for accelerated aging and performance testing.	Chemical compatibility with various lithium salts and organic carbonates.
Microelectronic Photoresist Stripping	Removing organic coatings from substrates using specialized solvent blends at elevated temperatures.	Maintains structural integrity under thermal stress and solvent exposure.

Parameter	Specification for PL-CP53
Base Material	100% Virgin High-Density PTFE (Polytetrafluoroethylene)
Optional Materials	PFA (Perfluoroalkoxy) for enhanced transparency or chemical purity
Dimensions (L x W x H)	Fully Customizable (Tailored to client workspace and batch size)
Wall Thickness Range	Customizable (Standard 5mm to 30mm+ based on volume)
Operating Temperature Range	-200°C to +260°C (-328°F to +500°F)
Chemical Compatibility	Universal (Except molten alkali metals and certain fluorinating agents)
Fabrication Method	5-Axis CNC Machining / High-Precision Welding (as required)
Internal Features	Customizable baffles, filter slots, and tiered supports
Drainage Systems	Optional integrated PTFE ball valves or NPT threaded ports

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Parameter	**Specification for PL-CP53**	
Lid Configuration	Loose-fit, Bolt-on, or Hinged PTFE covers available	
Surface Finish	Machined smooth (Ra < 0.8 µm available upon request)	
Load Capacity	Engineered to support specific material densities and volumes	