KINTEK

Beakers, Measuring Cups & Cylinders Catalog

Contact us for more catalogs of PTFE(Teflon) Products, Sample Preparation & Filtration, Reaction & Synthesis Equipment, High-Purity & Trace Analysis, Custom Machining Services, General Consumables & Seals, Electrochemistry & New Energy Testing, Basic Labware & Containers, Fluid Transfer, Tubing & Valves, etc.

KINTEK

COMPANY PROFILE

>>> About Us

From everyday basic labware (beakers, measuring cylinders, crucibles, dishes, reagent/wash bottles, centrifuge and digestion tubes), high-purity trace analysis instruments, and cleaning/storage tanks, to comprehensive fluid transfer components (tubing, fittings, valves), sample prep and filtration tools (separatory funnels, burettes, filters, pipettes, tweezers, spatulas), and general consumables (stirring bars, O-rings, gaskets, seal tapes, caps, septa), extending all the way to advanced derivative and reaction apparatus like standard or custom electrochemical cells, battery testing fixtures, electrode accessories, hydrothermal synthesis liners, microwave digestion vessels, microchannel reactors, and condensation/reflux devices, KINTEK manufactures virtually all imaginable laboratory supplies crafted from PTFE and PFA. Backed by end-to-end custom CNC fabrication, we are equipped to deliver absolutely everything from complex non-standard machined parts and bespoke laboratory setups to high-volume orders, maintaining an exclusive and absolute focus on high-performance fluoropolymer materials.

Custom Ptfe Groundwater Sampling Bucket Corrosion Resistant Detachable Fluoropolymer Sampler For Trace Analysis

Item Number: PL-CP296

Introduction

Precision-engineered custom PTFE groundwater sampling bucket for high-purity environmental monitoring. Features extreme chemical resistance, impact-resistant fluoropolymer construction, and a detachable design for easy decontamination. Optimized for corrosive wastewater and ultra-trace analysis in demanding industrial field applications.

Learn More

Application	Description	Key Benefit
Deep Well Groundwater Monitoring	Collection of groundwater samples from depths where pressure and chemical variety are high.	Chemical inertness ensures sample purity.
Petroleum Refinery Wastewater	Sampling complex effluents containing hydrocarbons, acids, and bases for regulatory compliance.	Resistance to corrosive refinery chemicals.
Acid Mine Drainage (AMD)	Monitoring highly acidic and metal-rich waters surrounding mining operations.	Prevents container corrosion and leaching.
Contaminated Site Remediation	Extracting soil pore water and groundwater to track the progress of remediation efforts.	Reliable data through zero-contamination.
High-Purity Chemical Transfer	Used as a temporary collection and transport vessel for laboratory-grade reagents.	Maintains the original purity of the reagent.
Industrial Effluent Testing	Routine monitoring of discharge points in chemical manufacturing facilities.	Durable enough for repeated daily use.
Hydrogeological Research	Scientific data collection for long-term studies on aquifer chemistry and health.	Long-term reliability and consistency.

Feature	Specification Details (Item: PL-CP296)	Options
Primary Material	High-Purity Virgin PTFE / PFA	Custom Selection Based on Inertness Needs
Capacity Range	Fully Customizable (e.g., 500mL, 1000mL, 2000mL+)	Client-Defined Volume
Outer Diameter	Engineered to fit specific well casing sizes	Custom Dimensions (Standard or Metric)
Wall Thickness	Reinforced for impact resistance	Customizable for Depth/Pressure
Connection Type	Threaded, Snap-fit, or Eyelet for cable attachment	Bespoke Mechanical Interface
Design Type	Fully Detachable / Modular	Customizable Component Count
Surface Finish	High-precision CNC smooth finish	Standard or Ultra-Smooth
Temperature Limit	-200°C to +260°C (Material Dependent)	Custom Thermal Rating
Chemical Resistance	Full spectrum (Acids, Bases, Solvents)	Universal Compatibility
Fabrication Method	End-to-end Custom CNC Machining	Precision Fabricated per Drawing

Large Scale Ptfe Beakers And Flasks For High Temperature Corrosion Resistant Laboratory Applications With Custom Cnc Fabrication

Item Number: PL-CP278

Introduction

High-performance PTFE beakers and flasks offering superior chemical resistance and thermal stability for demanding laboratory environments. Fully customizable large-scale labware engineered with precision CNC fabrication to meet specific industrial requirements for high-purity trace analysis and chemical processing.

Learn More

Application	Description	Key Benefit
Trace Metal Analysis	Preparation and storage of samples for ICP-MS and ICP-OES analysis where low-level contamination must be avoided.	Zero leaching of metallic impurities ensures analytical accuracy.
Hydrofluoric Acid Handling	Safe containment and mixing of HF and other aggressive fluoride-based etching solutions used in material science.	Total resistance to fluoride attack that would dissolve standard glass.
Semiconductor Fabrication	Use in cleanroom environments for wafer cleaning processes and high-purity chemical delivery systems.	Ultra-high purity material prevents ionic contamination of sensitive components.
Pharmaceutical Synthesis	Reaction vessels for the production of active pharmaceutical ingredients (APIs) involving corrosive catalysts or solvents.	Non-reactive surface maintains the integrity and purity of the final product.
Petrochemical Testing	High-temperature testing of oil additives and corrosive petroleum by-products in demanding refinery lab settings.	Thermal and chemical robustness under continuous industrial stress.
Cryogenic Research	Storage and handling of liquefied gases and biological samples at extremely low temperatures.	Maintains flexibility and structural integrity at cryogenic scales.
Large-Scale Chemical Storage	Custom-built large-capacity tanks for the bulk storage of high-purity reagents and aggressive industrial acids.	Bespoke dimensions allow for seamless integration into existing plant infrastructure.
Electrochemical Cell Housing	Serving as the main body for custom-built electrochemical cells and battery testing fixtures.	Excellent electrical insulation and chemical stability during electrolysis.

Parameter	Technical Data (PL-CP278 Series)
Base Material	Virgin Polytetrafluoroethylene (PTFE)
Specific Gravity	2.10 - 2.20 g/cc
Melting Point	621°F / 327°C
Heat Deflection Temperature (HDT)	248°F / 120°C
Hardness (Shore D)	55D
Tensile Strength	2,990 - 4,970 psi
Flexural Strength	2,490 psi

Application	Description	Key Benefit
Parameter	**Technical Data (PL-CP278 Series)**	
Coefficient of Friction	0.110	
Water Absorption (24 hr)	0.01%	
Dielectric Constant	2.1	
Customization Options	Available for all PL-CP278 variants, including custom dimensions, wall thickness, and integrated fittings	
Manufacturing Process	Precision CNC Machining and Custom Fabrication	
Size Range	Standard sizes from 10ml to 20L; bespoke large-scale orders available upon request	

Pfa Laboratory Pipette Tips High Purity Fluoropolymer Pipetting Tubes For Electronic Pipettors Customizable Teflon Suction Tubes

Item Number: PL-CP430

Introduction

High-purity PFA laboratory pipette tips designed for electronic pipettors. These customizable 50ml Teflon suction tubes offer superior chemical resistance and zero contamination for trace analysis, semiconductor chemistry, and aggressive reagent handling within modern professional laboratory environments.

Learn More

Application	Description	Key Benefit
Semiconductor Wafer Cleaning	Precise dispensing of ultra-pure hydrofluoric acid and photoresist strippers in cleanroom environments.	Zero metallic ion contamination and extreme acid resistance.
ICP-MS Sample Preparation	Transfer of concentrated nitric and hydrochloric acids during the digestion of geological or biological samples.	Eliminates background interference from leached additives.
Pharmaceutical R&D	Handling of reactive organic synthesis intermediates and aggressive solvents in drug discovery labs.	Prevents sample-to-vessel interaction and ensures reagent purity.
Environmental Trace Analysis	Sampling and sub-sampling of aqueous environmental extracts for the detection of heavy metals and pollutants.	High recovery rates for low-concentration analytes due to low retention.
Petrochemical Testing	Volumetric measurement and transfer of volatile hydrocarbons and high-temperature oil samples.	Maintains dimensional stability and seal integrity under heat.
Battery Technology Research	Dispensing of corrosive electrolytes and lithium-ion salts during the assembly of experimental battery cells.	Long-term durability against aggressive electrochemical reagents.
Nuclear Radiochemistry	Handling of radioactive isotopes and corrosive carrier solutions in shielded laboratory environments.	Ease of decontamination due to the non-stick surface properties.

Parameter	Specification Details for Item PL-CP430
Product Identification	PL-CP430 High-Purity PFA Pipette System
Primary Material	100% Virgin Perfluoroalkoxy (PFA)
Nominal Capacity	50ml (Standard) / Fully Customizable Sizes Available
Fabrication Method	High-Precision CNC Machined & Molded Component
Compatible Devices	Designed for major electronic pipettors (Custom adapters available)
Operating Temperature Range	-200°C to +260°C (-328°F to +500°F)
Chemical Resistance	Resistant to HF, HNO3, H2SO4, Aqua Regia, and organic solvents
Surface Finish	Ultra-smooth, low-porosity internal and external surfaces
Permeability	Extremely low for water vapor and common laboratory gases

Application	Description	Key Benefit
Parameter	**Specification Details for Item PL-CP430**	
Sterilization Compatibility	Autoclavable; compatible with ETO and chemical sterilization	
Customization Options	Bespoke length, tip taper, wall thickness, and mounting interface	
Trace Element Purity	Certified <1 ppb for critical metallic species	

Custom Thickened Ptfe Beaker High Temperature Hot Plate Heating Resistant Precision Laboratory Labware Customizable Fluoropolymer Vessel

Item Number: PL-CP076

Introduction

Discover high-purity custom PTFE beakers designed for demanding laboratory environments. Featuring a thickened wall for superior thermal stability and 200°C hot plate resistance, these bespoke fluoropolymer vessels ensure exceptional chemical inertness and long-term durability for high-end industrial research.

Learn More

Application	Description	Key Benefit
Trace Metal Analysis	Preparation of samples using concentrated nitric or hydrofluoric acid for ICP-MS analysis.	Zero metal leaching ensures analytical accuracy.
Semiconductor Etching	Handling of corrosive etchants used in wafer processing and cleaning stages.	Extreme resistance to aggressive HF and acid blends.
Battery Research	Synthesis and testing of electrolyte components at elevated temperatures.	High thermal stability prevents vessel deformation.
Pharmaceutical Synthesis	Mixing and heating of organic reagents during active pharmaceutical ingredient (API) development.	Non-reactive surface prevents sample contamination.
Petrochemical Testing	High-temperature digestion of oil samples for sulfur and metal content determination.	Withstands 200°C sustained heating on hot plates.
Environmental Monitoring	Large-scale acid digestion of soil and water samples for pollutant detection.	Durable thickened walls handle heavy industrial usage.
Aerospace Materials Testing	Testing of specialty coatings and resins in high-temperature chemical baths.	Consistent performance in extreme processing conditions.

Specification	Details (Model: PL-CP076)
Base Material	High-Purity Polytetrafluoroethylene (PTFE)
Primary Capacity	150ml (Customizable to any volume)
Temperature Resistance (Continuous)	200°C
Temperature Resistance (Peak)	260°C
Wall Construction	Thickened Profile (Customizable wall thickness)
Heating Method	Electric Hot Plate, Sand Bath, or Oil Bath
Chemical Compatibility	Universal (pH 0-14)
Deformation Tolerance	Low-warpage precision machined base
Flammability Rating	UL94 V-0
Manufacturing Process	Precision CNC Machining / Custom Fabrication

Application	Description	Key Benefit
Specification	**Details (Model: PL-CP076)**	
Customization Options	Height, Diameter, Wall Thickness, Spouts, Lids, Internal Ribbing	

Custom Ptfe Measuring Cylinders For Advanced Scientific And Industrial Applications

Item Number: PL-1009

Introduction

Discover the superior performance of our Polytetrafluoroethylene (PTFE) measuring cylinders, engineered for precision and resilience in demanding environments.

Learn More

Capacity	Total Height	Outer Diameter	Weight
10ml	108mm	17mm	42g
20ml	108mm	24mm	64g
50ml	118mm	34mm	128g
100ml	138mm	40mm	158g
250ml	147mm	60mm	374g
500ml	160mm	79mm	460g
1000ml	180mm	100mm	699g
2000ml	/	/	/

Custom Ptfe Beaker With Lid 200Ml Hot Plate Compatible 200C Temperature Resistant Laboratory Vessel

Item Number: PL-CP075

Introduction

High-purity custom PTFE beaker 200ml designed for aggressive chemical processing and hot plate heating up to 200C. Featuring optional lids and full CNC customization for demanding laboratory environments requiring superior chemical resistance and thermal stability in every application.

Learn More

Application	Description	Key Benefit
Trace Metal Analysis	Preparation of samples using concentrated mineral acids for ICP-MS or AAS analysis.	Zero metal leaching ensures extremely low detection limits and high data accuracy.
Semiconductor Processing	Handling and mixing of high-purity etching solutions and photoresist strippers.	Maintains the required sub-ppb purity levels essential for wafer fabrication processes.
Pharmaceutical Synthesis	Small-batch reaction vessel for the synthesis of active pharmaceutical ingredients (APIs).	Chemical inertness prevents side reactions and ensures the purity of the final compound.
Battery Research	Testing of aggressive electrolytes and molten salts in energy storage development.	Withstands the corrosive nature of lithium salts and high-temperature cycling.
Acid Digestion	High-temperature decomposition of geological or environmental samples on hot plates.	Allows for safe heating with hydrofluoric and perchloric acids that would destroy glass.
Petrochemical Testing	Analysis of crude oil derivatives and catalysts involving high-temperature solvents.	Robust thermal and chemical resistance prevents vessel degradation in harsh environments.
Hydrothermal Pre-treatment	Preliminary heating and mixing of reagents before secondary high-pressure processing.	Consistent performance under moderate heat facilitates uniform sample preparation.

Parameter	Specification Details
Product Item Number	PL-CP075
Base Material	100% Virgin High-Density PTFE (Polytetrafluoroethylene)
Standard Capacity	200ml (Fully Customizable Volume available)
Continuous Operating Temp	-200°C to +260°C (Material Limit)
Hot Plate Safety Limit	Up to 200°C (Recommended with controlled ramp-up)
Flammability Rating	UL94 V-0 (Non-flammable)
Chemical Resistance	Universal (Except molten alkali metals and gaseous fluorine)

Feature	Configuration Options
Wall Thickness	Standard heavy-wall or bespoke thickness for optimized heat transfer
Lid Configuration	Optional flat lid, threaded cap, or custom aperture lid (Item PL-CP075-L)

Application	Description	Key Benefit
Parameter	**Specification Details**	
Feature	**Configuration Options**	
Base Design	Flat bottom for hot plate contact or recessed for specific heating mantles	
Graduations	Optional laser-etched or machined permanent markings	
Fabrication Method	Full CNC Machining from solid billet	
Surface Finish	High-precision smooth finish (Custom Ra values available)	

High Purity Pfa Beakers With Handles And Cleaning Baskets For Trace Analysis And Industrial Chemical Processing

Item Number: PL-CP195

Introduction

Engineered for extreme chemical resistance these high purity PFA beakers with handles and cleaning baskets ensure contamination free sample handling available in multiple volumes with full CNC customization options for demanding industrial trace analysis and hazardous chemical processing environments

Learn More

Application	Description	Key Benefit
Semiconductor Wafer Etching	Handling and mixing of high-purity etching solutions like HF and Buffered Oxide Etch (BOE).	Prevents ionic contamination and ensures consistent etching rates.
Trace Metal Analysis	Preparation of environmental and biological samples for ICP-MS and ICP-OES analysis.	Minimizes background noise and prevents sample loss through absorption.
Pharmaceutical Synthesis	Reaction vessel for the production of active pharmaceutical ingredients (APIs) involving corrosive catalysts.	Ensures high purity levels and compliance with stringent FDA-related material standards.
Battery Research	Handling and mixing of advanced lithium-ion battery electrolytes and corrosive battery components.	Superior resistance to organic solvents and chemical stability during testing.
Petrochemical Testing	Analysis of crude oil derivatives and catalysts involving high-temperature acid digestion.	Maintains structural integrity under heat while resisting heavy chemical attack.
Nuclear Energy Research	Storage and processing of radioactive or highly corrosive isotopes in specialized lab settings.	Long-term durability and resistance to radiation-induced degradation.

Specification Category	PL-CP195 Detail
Primary Material	High-Purity Perfluoroalkoxy (PFA)
Volume Capacity	Fully Customizable (e.g., 250ml, 1L, and larger variants)
Handle Configuration	Custom Designed Integrated or Removable Handles
Accessory Options	Customizable Cleaning Baskets / Soaking Inserts
Thermal Stability Range	-200°C to +260°C
Chemical Compatibility	Universal (Includes HF, Aqua Regia, Organic Solvents)
Surface Finish	High-Precision CNC Machined / Ultra-Smooth
Dimensional Tolerances	Per Client Specification / Engineering Drawing
Graduation Markings	Optional Custom Molded or Machined Graduations
Lid/Cap Compatibility	Bespoke PFA Lids Available Upon Request

High Purity Ptfe Centrifuge Tubes For Trace Analysis Custom Laboratory Centrifugation Containers With Racks

Item Number: PL-CP70

Introduction

Secure sample integrity with custom-engineered PTFE centrifuge tubes. Designed for zero leaching and 1000r/min durability, these high-purity laboratory containers support critical trace analysis in semiconductor and pharmaceutical workflows with bespoke sizing and rack options.

Learn More

Application	Description	Key Benefit
Trace Metal Analysis	Centrifugation of environmental and geological samples in concentrated acids for ICP-MS preparation.	Zero background contamination levels.
Semiconductor Processing	Handling of ultra-pure photoresists and etching chemicals that dissolve standard plastic labware.	Material purity matches industry standards.
Battery Research	Separation of lithium-ion electrolytes and active materials involving highly reactive fluorinated compounds.	Excellent chemical resistance to electrolytes.
Pharmaceutical Synthesis	Isolation of high-value active pharmaceutical ingredients (APIs) in harsh organic solvent systems.	High recovery rate due to non-stick surface.
Nuclear Medicine	Processing of radiopharmaceuticals where material durability and non-adsorption are critical for safety.	Radiation stability and easy decontamination.
Hydrofluoric Acid Handling	Separation and storage of HF-containing solutions used in glass etching or mineral digestion.	Total resistance to HF etching and damage.
Cryogenic Centrifugation	Use in ultra-low temperature centrifugation processes for biological or polymer research.	Maintains ductility and seal at low temps.

Specification	PL-CP70-50 (50ml Variant)	PL-CP70-100 (100ml Variant)	Custom Configurations
Base Material	High-Purity PTFE	High-Purity PTFE	PTFE / PFA Optional
Nominal Capacity	50 ml	100 ml	1ml to 1000ml+
Max Operating Speed	1000 r/min	1000 r/min	Variable per Wall Thickness
Temperature Range	-200°C to +260°C	-200°C to +260°C	Custom Range Possible
Wall Thickness	Standard Heavy Wall	Standard Heavy Wall	Custom CNC Defined
Bottom Shape	Conical / Round / Flat	Conical / Round / Flat	Bespoke Taper Profiles
Cap Type	Threaded Leak-Proof Seal	Threaded Leak-Proof Seal	Snap-fit or O-ring Sealed
Leaching/Extraction	Below Detection Limits	Below Detection Limits	Certified High-Purity Grades
Rack Compatibility	Custom Matched Racks	Custom Matched Racks	Multi-Position CNC Racks
Fabrication Method	Precision CNC Machining	Precision CNC Machining	Full Custom Bespoke Designs

High Purity Pfa Sample Dissolution Cups Acid Resistant Chemical Digestion Vessels With Lids Trace Analysis Labware

Item Number: PL-CP36

Introduction

Engineered for ultra-trace analysis, these high-purity PFA sample dissolution cups offer extreme chemical resistance and ultra-low metal background levels. Ideal for ICP-MS sample preparation, ensuring maximum sample integrity and reliable data in demanding laboratory environments and industrial workflows.

Learn More

Application	Description	Key Benefit
Trace Metal Analysis	Digestion of environmental or biological samples using concentrated HNO3 or HCl for ICP-MS detection.	Minimizes blank values for accurate detection of sub-ppb level contaminants.
Semiconductor Processing	Storage and transport of ultra-pure wet chemicals and etching solutions used in wafer fabrication.	Prevents ionic contamination that could compromise semiconductor device performance.
Geochemical Digestion	Decomposition of silicate rocks and mineral samples using hydrofluoric acid (HF) at elevated temperatures.	Resistant to HF which dissolves glass/quartz; provides high-temperature stability for refluxing.
Pharmaceutical Quality Control	Preparation of active pharmaceutical ingredients (APIs) for heavy metal testing according to USP standards.	Ensures compliance with strict regulatory purity requirements and prevents sample-vessel interaction.
Environmental Monitoring	Long-term storage of acid-preserved water and soil leachates for monitoring pollutants in remote areas.	Excellent sealing prevents sample loss; chemically inert material prevents leaching during storage.
Battery Research	Testing of electrolyte components and corrosive additives in high-performance lithium-ion battery development.	Withstands aggressive solvents and salts used in advanced battery chemistry research.

Parameter	Specification Detail for PL-CP36
Material	Ultra-pure Perfluoroalkoxy Alkane (PFA)
Standard Volume	5ml (Base configuration available for PL-CP36)
Customization Capability	Fully customizable dimensions, volumes, and thread types
Temperature Range	-200°C to +260°C
Chemical Resistance	Resistant to all acids, bases, and organic solvents (e.g., HF, Aqua Regia)
Lid Design	Threaded sealing cap with integrated leak-proof seal
Surface Finish	High-precision CNC machined, mirror-smooth interior surface
Blank Value Control	Low background levels suitable for ultra-trace analysis
Wall Geometry	Available in flat-bottom, round-bottom, or conical internal geometries

Pfa Eggplant Flask Custom Molded Pear Shaped Laboratory Flask Corrosion Resistant Glass Alternative

Item Number: PL-CP402

Introduction

High-purity PFA eggplant flasks offer exceptional chemical resistance and ultra-low metal leaching for trace analysis. These custom-molded fluoropolymer pear-shaped flasks provide a durable, non-contaminating, and high-performance alternative to traditional glass in demanding modern semiconductor and chemical laboratory environments.

Learn More

Application	Description	Key Benefit
Trace Metal Analysis	Preparation and digestion of environmental and biological samples for high-sensitivity detection.	Prevents leaching of trace elements (B, Si, Na) common in glass.
Semiconductor Chemical R&D	Storage and reaction of high-purity etching solutions and photoresist chemicals.	Ensures zero contamination from the container to maintain electronic grade purity.
Hydrofluoric Acid Reactions	Concentration and evaporation of HF-containing solutions that would dissolve glass.	Absolute resistance to HF, enabling safe and reliable processing.
Isotope Geochemistry	Sample processing for mass spectrometry in cleanroom laboratory environments.	Extremely low background noise for precise isotopic measurements.
Rotary Evaporation	Use as a collection or reaction flask for concentrating aggressive organic solvents.	High durability under vacuum and resistance to solvent swelling.
Pharmaceutical Synthesis	Development of fluorinated drug intermediates and reactive organic synthesis.	Non-stick surface minimizes product loss of expensive APIs.
Cryogenic Storage	Long-term containment of reactive reagents at extremely low temperatures.	Maintains ductility and seal integrity at sub-zero ranges.
Battery Research	Testing and storage of aggressive lithium-ion battery electrolytes and additives.	Chemical stability against varied electrochemical components.

Parameter	Specifications for PL-CP402
Model Number	PL-CP402
Material Construction	High-Purity Perfluoroalkoxy (PFA)
Manufacturing Method	Precision Molding and CNC Machining
Standard Capacity Range	Customizable (e.g., 10ml, 25ml, 50ml, 100ml, 250ml, 500ml, 1000ml)
Neck Configuration	Customizable (Standard Taper Joints, Threaded Caps, or Custom Flanges)
Wall Thickness	Customizable to meet specific vacuum or pressure requirements
Operating Temperature	-200°C to +260°C (-328°F to +500°F)
Chemical Resistance	Universal (Except molten alkali metals and fluorine at high temp)
Surface Finish	Smooth, non-porous fluoropolymer finish

Application	Description	Key Benefit
Parameter	**Specifications for PL-CP402**	
Visual Clarity	Translucent for easy fluid level monitoring	
Leaching Profile	Exceeds semiconductor-grade purity requirements	

Heat Resistant Custom Ptfe Laboratory Beaker For Hot Plate Heating And Trace Analysis

Item Number: PL-CP232

Introduction

High-performance custom PTFE beakers designed for reliable hot plate heating up to 260°C. Engineered with superior chemical resistance and anti-deformation properties, these 30ml laboratory vessels ensure high-purity trace analysis and long-term durability in demanding industrial chemical processing environments.

Learn More

Application	Description	Key Benefit
Trace Metal Digestion	Heating soil or tissue samples in concentrated nitric or hydrofluoric acid on hot plates.	Zero metal ion leaching ensures analytical accuracy at ppb levels.
Semiconductor Etching	Small-batch cleaning and etching of silicon wafers using aggressive chemical baths.	Resistance to HF and extreme purity prevent wafer contamination.
Pharmaceutical Synthesis	Refluxing or heating reactive intermediates in organic solvents at controlled temperatures.	Non-reactive surface prevents catalytic interference with sensitive reactions.
Petrochemical Testing	Evaporation of volatile compounds and acid number testing in heavy oil samples.	High thermal tolerance allows for safe processing of high-boiling point fluids.
Environmental Analysis	Preparation of water samples for ICP-MS through acid-assisted concentration.	Hydrophobic walls ensure 100% sample recovery and minimal carryover.
Battery Research	Testing electrolyte stability and electrode materials in corrosive electrochemical environments.	Withstands lithium salts and aggressive solvents used in energy storage R&D.

Attribute	Detailed Specification for PL-CP232 Series
Model Identification	PL-CP232
Standard Capacity	30ml (Custom volumes available upon request)
Material Composition	100% Virgin High-Molecular Weight PTFE
Thermal Resistance (Continuous)	Up to 200°C
Maximum Temperature Limit	260°C (500°F)
Chemical Resistance	Full range (pH 0-14); resistant to all common laboratory acids/solvents
Deformation Resistance	High-density machined base to prevent warping during heating
Bottom Profile	Ultra-flat machined surface for optimized hot plate contact
Fabrication Tolerance	Precision CNC machined to +/- 0.1mm
Customization Capability	Fully customizable dimensions, wall thickness, and geometry

Custom Thickened Ptfe Beaker 3000Ml Hotplate Heating High Temperature Deformation Resistant Fluoropolymer Labware

Item Number: PL-CP236

Introduction

Professional 3000ml thickened PTFE beaker designed for reliable hotplate heating up to 200°C. Engineered for maximum chemical inertness and deformation resistance, this custom-fabricated laboratory vessel ensures safe, high-purity processing in demanding industrial and research environments.

Learn More

Application	Description	Key Benefit
Trace Metal Digestion	Heating samples in concentrated mineral acids for ICP-MS or AAS analysis.	Zero metal leaching and acid resistance.
Battery Electrolyte Prep	Mixing and heating aggressive lithium-ion battery electrolyte formulations.	Prevention of contamination and moisture ingress.
Semiconductor Cleaning	Batch cleaning of microelectronic components in hydrofluoric acid baths.	Exceptional resistance to fluoride-based chemistries.
Pharmaceutical Synthesis	Large-scale reaction vessel for aggressive organic synthesis involving caustic reagents.	Long-term durability and non-reactive surface.
Petrochemical Testing	Analysis of high-sulfur crude oil and volatile catalysts at elevated temperatures.	High thermal tolerance and chemical stability.
Metallurgy Analysis	Dissolution of precious metal ores using aqua regia on industrial hotplates.	Corrosion-proof performance in harsh environments.
Specialty Chemical Mfg	Mixing and heating bespoke polymer additives or corrosive surfactants.	High volume capacity with mechanical reliability.

Specification Category	Parameter Details (PL-CP236)
Model Identification	PL-CP236
Material Construction	100% Virgin High-Purity PTFE (Polytetrafluoroethylene)
Capacity	3000ml (Standard) / Fully Customizable Sizes Available
Wall Configuration	Thickened Heavy-Duty Design (Anti-Deformation)
Maximum Operating Temp	200°C (Direct Hotplate Surface Contact)
Intermittent Temp Range	Up to 260°C (General Environment)
Chemical Resistance	Universal (Except molten alkali metals and fluorine gas)
Flammability Rating	UL94 V0 (Self-extinguishing)
Manufacturing Method	Precision CNC Machined / Custom Fabricated
Cleaning Method	Autoclavable, compatible with ultra-pure acid cleaning
Base Design	Ultra-flat machined bottom for optimized thermal contact
Customization Options	Adjustable wall thickness, diameter, height, and lid integration

Custom Pfa Pear Shaped Flask High Purity Corrosion Resistant Labware Custom Molded Fluoropolymer Flask Glass Replacement Solution

Item Number: PL-CP188

Introduction

Engineered for high-purity trace analysis, this custom PFA pear-shaped flask offers exceptional chemical resistance and low leaching. Replace fragile glass with durable precision-molded fluoropolymer solutions. Our custom fabrication ensures exact specifications for every critical process.

Learn More

Application	Description	Key Benefit
Trace Metal Analysis	Used for sample preparation and digestion where minimal background noise is required for ICP-MS or AAS.	Eliminates Si and B leaching for higher data accuracy.
Semiconductor Chemistry	Handling and storage of ultra-pure reagents and etching chemicals used in wafer fabrication.	Prevents metallic ion contamination in high-purity processes.
Organic Fluoride Synthesis	Reaction vessel for highly reactive or trace-impurity-sensitive organic fluorides.	Prevents molecular adsorption on walls, increasing yield.
Geochemical Digestion	Dissolution of geological samples using hydrofluoric acid at elevated temperatures.	Superior resistance to HF which would dissolve glass flasks.
Pharmaceutical R&D	Synthesis of active pharmaceutical ingredients (APIs) in aggressive solvent environments.	Ensures product purity and prevents vessel-sample interaction.
Environmental Monitoring	Concentration and evaporation of water or soil extracts containing corrosive pollutants.	Long-term durability and resistance to cross-contamination.
Electrochemical Research	Serving as a custom reservoir for corrosive electrolytes in advanced battery testing.	Maintains electrolyte integrity under various voltage and temperature conditions.

Feature	Specification Details (Model: PL-CP188)
Material Selection	High-Purity Perfluoroalkoxy (PFA)
Design Type	Pear-Shaped (Evaporation Flask Style)
Manufacturing Method	Custom Molding and Precision CNC Machining
Capacity Range	Fully customizable based on client requirements
Joint Sizes	Custom-fit (e.g., 14/20, 19/22, 24/40 or bespoke dimensions)
Wall Thickness	Tailored to application pressure and thermal needs
Thermal Resistance	-200°C to +260°C (Material limit)
Chemical Resistance	Universal resistance (except molten alkali metals and fluorine gas)
Surface Finish	Ultra-smooth, non-porous fluoropolymer surface
Custom Options	Custom neck lengths, side ports, and integrated sensor wells available

High Purity Pfa Beaker With Handle And Large Capacity Washable Soak Basket Multi Spec Teflon Laboratory Labware

Item Number: PL-CP409

Introduction

High-performance PFA beakers and soak baskets designed for trace analysis and corrosive chemical handling. These multi-spec Teflon vessels feature ergonomic handles and large capacities, ensuring chemical inertness, thermal stability, and easy cleaning for demanding industrial and laboratory applications.

Learn More

Application	Description	Key Benefit
Semiconductor Cleaning	Immersion of silicon wafers and components in high-purity etching solutions using the soak basket.	Prevents metallic contamination and withstands aggressive etching acids.
Trace Metal Analysis	Preparation and storage of samples for ultra-trace element detection in geochemical and environmental labs.	Lowest possible leaching levels for PPT-level accuracy.
Pharmaceutical Synthesis	Reaction vessel for the production of active pharmaceutical ingredients (APIs) involving corrosive catalysts.	Ensures no cross-contamination and survives wide temperature swings.
Battery Research	Testing of electrolyte stability and electrode components in highly reactive chemical environments.	Long-term durability against corrosive battery chemistries.
Acid Digestion	High-temperature breakdown of solid samples using concentrated nitric or hydrochloric acids.	Safe handling of boiling acids with integrated safety handles.
Industrial Part Degreasing	Using the large-capacity soak basket to clean precision machined parts in volatile organic solvents.	Universal solvent resistance and easy drainage.
Solar Cell Production	Acid texturing and cleaning of photovoltaic substrates in multi-spec PFA containers.	Consistent performance in high-throughput manufacturing lines.

Specification Category	Parameter Details for PL-CP409 Series
Material Composition	100% Virgin High-Purity PFA (Perfluoroalkoxy)
Available Capacities	250ml, 500ml, 1L, 2L, and Custom Large Capacities (up to 10L+)
Temperature Resistance	-200°C to +260°C (-328°F to +500°F)
Handle Configuration	Integrated Side Handle (Standard on 1L+; Optional on smaller sizes)
Basket Compatibility	Custom-fit Soak Baskets with variable perforation patterns
Wall Thickness	Standard Heavy-Wall Design or Custom CNC Machined Thickness
Base Design	Flat-bottom for Hot Plate Stability or Rounded for Specialized Agitation
Chemical Compatibility	Universal (Except molten alkali metals and fluorine at high temperatures)
Fabrication Method	Injection Molding or Precision CNC Machining for Custom Geometries

Application	Description	Key Benefit
Specification Category	**Parameter Details for PL-CP409 Series**	
Trace Element Levels	Sub-ppb levels for standard units; PPT-grade available upon request	

High Purity Pfa Beakers With Handles Large Capacity Chemical Resistant Teflon Laboratory Beakers And Custom Cleaning Baskets

Item Number: PL-CP44

Introduction

Engineered from premium high-purity PFA, these chemical-resistant laboratory beakers and customizable soaking baskets provide exceptional thermal stability and ultra-low trace metal leaching for critical semiconductor, environmental analysis, and pharmaceutical research applications.

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Application	Description	Key Benefit
Semiconductor Etching	Handling of high-purity acids for wafer cleaning and etching processes in cleanroom environments.	Zero trace metal contamination
Trace Metal Analysis	Sample digestion and storage for ICP-MS and ICP-OES where PPT-level accuracy is required.	Ultra-low leaching profile
Pharmaceutical Synthesis	Mixing and reacting aggressive pharmaceutical intermediates that would degrade standard glass.	Superior chemical inertness
Environmental Testing	Preparation of soil and water samples involving concentrated nitric and hydrochloric acids.	Durable against corrosive vapors
Battery Research	Handling of corrosive electrolytes and lithium salts at varying temperature cycles.	Wide thermal stability range
Petrochemical Refining	Storage and transport of high-temperature hydrocarbon samples and caustic catalysts.	Long-term structural integrity
Cryogenic Storage	Management of biological or chemical samples in liquid nitrogen and extreme cold.	Maintains flexibility at -200°C
Automated Cleaning	Use of custom baskets for ultrasonic or soak-cleaning of precision industrial components.	High-volume workflow efficiency

Specification Category	Parameter Details	PL-CP44 Capability
Material Foundation	Primary Polymer	High-Purity Perfluoroalkoxy (PFA)
Capacity Range	Standard and Custom Volumes	250ml, 1L, and Custom Large Capacity
Temperature Resistance	Operating Range	-200°C to +260°C
Chemical Resistance	Acid, Base, and Solvent Stability	Universal Resistance (Customizable configurations)
Physical Design	Handling Options	Integrated Handle or Standard Rim
Accessory Options	Cleaning & Storage	Customizable Soaking Baskets & Lids
Manufacturing Method	Fabrication Process	Injection Molding / Custom CNC Machining
Surface Finish	Surface Roughness	Optimized for Trace Analysis (Customizable)
Dimensional Specs	Height, Diameter, Wall Thickness	Customizable to Client Requirements
Compliance	Material Certification	High-Purity Industrial Grade

Custom Thickened Ptfe Laboratory Beaker For High Temperature Hot Plate Applications

Item Number: PL-CP235

Introduction

Engineered for extreme chemical resistance, this thickened PTFE beaker provides exceptional thermal stability up to 200°C. Perfect for demanding laboratory heating tasks, it features a heavy-duty design to resist deformation under high-stress industrial and chemical processing conditions.

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Application	Description	Key Benefit
Trace Metal Digestion	Preparing environmental samples using concentrated nitric or hydrofluoric acids at high heat.	Zero metal ion leaching ensures sample purity for ICP-MS analysis.
Semiconductor Etching	Handling high-purity etching solutions used in wafer cleaning and processing.	Exceptional resistance to aggressive acidic mixtures used in cleanrooms.
Battery Electrolyte Research	Formulating and testing lithium-ion battery electrolytes that are sensitive to moisture and impurities.	Chemical inertness prevents side reactions during sensitive formulation processes.
Pharmaceutical Synthesis	Conducting small-batch reactions involving highly corrosive organic catalysts or precursors.	Non-stick surface allows for complete recovery of high-value active ingredients.
Noble Metal Refining	Dissolving precious metals in aqua regia for assaying and purification.	Durable thickened walls withstand the high heat and extreme acidity of the dissolution process.
Molten Salt Studies	Researching energy storage materials at sustained temperatures near 200°C.	Superior thermal endurance prevents structural failure during long-term heating cycles.

Specification	Detail for PL-CP235
Base Model Number	PL-CP235
Nominal Capacity	300ml (Standard) / Fully Customizable
Material Composition	100% High-Purity PTFE (Polytetrafluoroethylene)
Wall Thickness Strategy	Thickened/Heavy-Duty Machined Construction
Continuous Working Temperature	Up to 200°C (392°F)
Maximum Intermittent Temperature	260°C (500°F)
Heating Surface Compatibility	Direct contact with ceramic/metal hot plates
Chemical Compatibility	Universal (Except molten alkali metals and gaseous fluorine)
Flammability Rating	UL94 V-0
Coefficient of Friction	Extremely Low (0.05 to 0.10)
Customization Options	Height, Diameter, Wall Thickness, Handles, Graduations, Spouts

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