

Custom 5L Large Capacity PTFE Storage Tank Corrosion Resistant Leak Proof Reagent Bottle With Screw Cap

Item Number: PL-CP301



Introduction

Engineered for extreme environments, this high-capacity 5L PTFE storage tank offers unparalleled chemical resistance and leak-proof sealing. Customizable to your specific lab requirements, it ensures ultra-pure reagent containment and long-term durability in demanding industrial research applications.

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Application	Description	Key Benefit
Semiconductor Processing	Storage and dispensing of ultra-high purity hydrofluoric acid and photoresist strippers used in wafer fabrication.	Prevents metallic ion contamination and maintains chemical potency.
Pharmaceutical Synthesis	Containment of aggressive organic intermediates and solvents during the scale-up of active pharmaceutical ingredients (APIs).	Ensures FDA-compliant, non-reactive storage for sensitive compounds.
Environmental Trace Analysis	Preparation and storage of concentrated acid standards for heavy metal detection in soil and water samples.	Minimal leaching ensures the integrity of parts-per-trillion (PPT) data.
Cryogenic Material Storage	Long-term preservation of biological or chemical samples at liquid nitrogen temperatures.	Maintains ductility and seal integrity at -200°C without cracking.
Petrochemical Testing	Handling of corrosive catalysts and high-temperature hydrocarbon fractions in pilot plant reactors.	Exceptional thermal stability and resistance to swelling in solvents.
Battery Research	Storage of electrolyte components and corrosive salts for lithium-ion and next-generation battery development.	Prevents moisture ingress and withstands aggressive electrochemical reagents.
Aerospace Materials Prep	Mixing and storing specialty resins and etching chemicals for composite surface preparation.	Robust safety for personnel handling hazardous pre-treatment fluids.

Specification Parameter	PL-CP301 Standard Details	Customization Options
Base Model Number	PL-CP301	Available for all variants
Material Construction	100% Virgin High-Purity PTFE	Custom PFA or modified PTFE available
Nominal Capacity	5000ml (5 Liters)	Scalable from 1L to 50L+
Closure Type	Precision Machined PTFE Screw Cap	Optional GL45, custom threads, or septa ports
Temperature Range	-200°C to +260°C	Optimized for specific thermal cycling
Chemical Resistance	Universal (except molten alkali metals)	Specialized coating options for specific gases
Internal Surface Finish	<0.5 µm Ra (Super Smooth)	Ultra-polishing for semiconductor standards
Wall Thickness	Industrial Heavy-Wall Design	Reinforced for high-pressure/vacuum use
Sealing Mechanism	Integrated PTFE Seal / Tapered Machined Fit	Optional O-ring groove or compression fittings
Compliance	FDA/USP Class VI Material Grade	Certification documentation available upon request
Dimensions	Custom Per Application Requirements	CNC Machining to specific footprint constraints