

# Large Capacity Ptfе Reaction Flask 20L Custom Multi Neck Laboratory Boiling Flask Fluoropolymer Chemical Processing Vessel

Item Number: PL-CP247



## Introduction

Optimized for extreme chemical resistance, this customizable 20L PTFE flask supports multi-neck configurations for complex laboratory reactions. Engineered for high-purity trace analysis and corrosive chemical processing, it ensures leak-free performance and exceptional durability in demanding industrial research environments.

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Application	Description	Key Benefit
Pharmaceutical Synthesis	Large-scale production of active pharmaceutical ingredients (APIs) involving aggressive reagents.	Eliminates risk of trace metal leaching from vessel walls into the product.
Semiconductor Grade Acid Prep	Dilution and mixing of ultra-high purity acids used in wafer cleaning processes.	Maintains PPT-level purity standards by preventing container-to-fluid contamination.
Hydrothermal Digestion	Processing of geological or environmental samples with hydrofluoric acid at elevated temperatures.	Superior resistance to HF which rapidly degrades standard glass laboratory equipment.
Specialty Chemical R&D	Pilot plant testing of new polymer additives or catalysts requiring precise temperature and stirring control.	Customizable multi-neck design allows for complex instrumentation integration.
Battery Material Testing	Development of electrolyte solutions and cathode precursors in a controlled, non-reactive environment.	Resists electrochemical degradation and prevents interference with sensitive material properties.
High-Temperature Distillation	Fractionation of corrosive organic solvents and complex mixtures.	Maintains structural integrity and seal tightness under continuous thermal load.

Parameter	Specification for PL-CP247
Model Identifier	PL-CP247
Core Material	High-Purity Polytetrafluoroethylene (PTFE)
Nominal Capacity	20 Liters (Custom volumes available upon request)
Neck Configuration	Customizable (Standard options: 1, 2, 3, 4, or 5 necks)
Joint/Neck Types	Precision CNC Threaded or Flanged (Per customer spec)
Specific Gravity	2.10 - 2.20 g/cc
Melting Point	327°C (621°F)
Max Operating Temp	260°C (500°F)
Heat Deflection Temp	120°C (248°F)
Shore Hardness	55D
Tensile Strength	2990 - 4970 psi

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<b>Flexural Strength</b>	2490 psi	
<b>Coefficient of Friction</b>	0.110 (Static)	
<b>Water Absorption</b>	0.01% (24-hour immersion)	
<b>Dielectric Constant</b>	2.1	
<b>Internal Finish</b>	Crevice-free, super-smooth CNC machined	
<b>Accessory Compatibility</b>	PTFE Stirring Paddles, Funnels, and Thermal Probes	