

# High Temperature Tfm Microwave Digestion Vessel Lid Compatible With Acid Evaporation Systems And Laboratory Pretreatment Equipment

Item Number: PL-CP315



## Introduction

High-performance TFM microwave digestion vessel lids engineered for extreme chemical resistance and thermal stability. These customizable lids ensure leak-proof seals for various digestion systems, providing reliable performance in trace analysis and high-pressure laboratory sample preparation specialized workflows.

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Application	Description	Key Benefit
Environmental Trace Analysis	Digestion of soil, sediment, and wastewater samples for heavy metal detection via ICP-MS.	Prevents cross-contamination and ensures total sample recovery.
Pharmaceutical Quality Control	Preparation of active pharmaceutical ingredients (APIs) for elemental impurity testing according to USP standards.	High purity TFM prevents leaching of organic or inorganic contaminants.
Petrochemical Testing	Decomposition of crude oil, lubricants, and polymer samples for catalyst residue analysis.	Withstands high temperatures required for breaking down complex hydrocarbons.
Food Safety & Nutrition	Mineralization of food matrices and agricultural products for pesticide and mineral content screening.	Maintains volatile species recovery for accurate nutritional labeling.
Geochemical Exploration	Dissolution of rock ores and mineral concentrates using hydrofluoric acid mixtures.	Exceptional resistance to HF ensures durability in harsh geological digestion.
Clinical Research	Digestion of biological tissues, blood, and hair samples for metabolic and toxicological studies.	Small-batch precision and easy decontamination between sensitive samples.
Battery Material Synthesis	Pretreatment and analysis of cathode materials and electrolytes in lithium-ion battery development.	Chemical inertness ensures the purity of high-performance electronic materials.
Metallurgy and Mining	High-pressure digestion of alloys and metal powders for precise stoichiometric determination.	Robust construction handles the intense pressure of metallic decomposition.

Parameter	Specifications for PL-CP315
Model Identifier	PL-CP315
Primary Material	Ultra-High Purity TFM (Modified PTFE)
Secondary Material Options	High-Purity PFA or Virgin PTFE (Customizable)
Compatibility Range	Customizable for various microwave digestion vessel models and acid evaporation systems
Fabrication Method	Full Precision CNC Machined (Non-Molded)
Sealing Mechanism	Customizable Interface (Tapered, Flat, or O-ring Groove)
Dimensions	Custom Product - Manufactured to user-provided specifications

Application	Description	Key Benefit
Parameter	Specifications for PL-CP315	
<b>Thermal Capacity</b>	Optimized for high-temperature digestion protocols (Customizable)	
<b>Pressure Rating</b>	Configurable based on vessel wall thickness and closure design	
<b>Chemical Resistance</b>	Universal resistance to acids, bases, and organic solvents	
<b>Surface Finish</b>	High-polish, low-porosity surface for trace analysis purity	