High Temperature Ptfe Reaction Sieve With Customizable Layers And Precision Pore Sizes For Threaded Sample Separation Devices

Item Number: PL-CP153

Introduction

Engineered for extreme chemical environments, this customizable PTFE reaction sieve features adjustable layers and pore counts. Designed with secure threaded connections, it ensures reliable sample separation and high-temperature performance for demanding laboratory and industrial chemical reaction processes.

Learn More

Application	Description	Key Benefit
Pharmaceutical Synthesis	Multi-stage separation of active pharmaceutical ingredients (APIs) from aggressive reaction mixtures.	Prevents cross-contamination and resists harsh organic solvents.
Petrochemical Filtration	Separation of catalysts and particulate matter from hot hydrocarbon streams during refining simulations.	Maintains structural integrity at high temperatures and pressures.
Trace Metal Analysis	Sample preparation and digestion involving concentrated mineral acids for ICP-MS or AAS analysis.	Zero metal leaching ensures the highest sensitivity and accuracy.
Semiconductor Processing	Filtration of high-purity photoresists and etching chemicals used in wafer fabrication.	Ensures ultra-clean fluid paths and prevents particle contamination.
Fine Chemical Production	Support for catalytic beds in continuous flow or batch reaction vessels for specialized synthesis.	Chemically inert support that does not interfere with reaction kinetics.
Environmental Testing	Separation of micro-plastics or pollutants from large volume water or soil extract samples.	Durable construction allows for high-throughput processing in field labs.
Biotech Sample Prep	Fractionation of biological macromolecules using customized pore sizes in a non-denaturing environment.	Low-protein binding surface ensures high yield and bio-compatibility.

Parameter	Specification for PL-CP153
Core Material	High-Purity Virgin PTFE (Polytetrafluoroethylene)
Number of Sieve Layers	Customizable (Single-layer to Multi-stage configurations)
Pore Diameter	Customizable (Precision drilled per specification)
Pore Distribution/Density	Customizable (Linear, staggered, or bespoke patterns)
Connection Type	Precision Threaded (Standard or Custom thread profiles)
Effective Diameter	Customizable per reactor vessel sizing
Operating Temperature Range	-200°C to +260°C (-328°F to +500°F)
Chemical Compatibility	Universal (Except molten alkali metals and fluorine gas)
Surface Finish	Machined Smooth (Low friction, non-stick)

Application	Description	Key Benefit
Parameter	**Specification for PL-CP153**	
Sealing Mechanism	Self-sealing PTFE threads or optional PTFE O-rings	
Fabrication Method	100% Custom CNC Machining	