

# **Sintered Plastic Porous Products**



Shanghai CMI Environmental Technology Co., Ltd.

#### **Sintered PE Filters**

Material: CMI PE sintered cartridges are made from UHMW-PE material. No any glue is used during production to keep the best function and good chemical resistance of PE.

Structure: CMI PE cartridges are sintered under high temp., with good mechanical performance and porosity, which makes it easy to wash.

#### **Features**

- High porosity (60%) ensures good flow rate
- Smooth surface makes it easier to wash and avoid dirt cohering
- No particle release
- Suitable for acid, alkali and solvent
- High Performance-Price Ratio: Cost is not high but can be used in many applications

# Disadvantage

It cannot be used in temp. which is higher than 80 deg C. If the filtration liquid is high viscosity, the pressure drop will be high.

#### SPEC.

- Filtration Rating: 0.2-140um,
- Common Diameter: φ20,φ25,φ30,φ35,φ40,φ45,φ50,φ60 ,(φ1000 is possible also)
- Length: 5"10"20"30"40"
- Besides the above spec., CMI can also make other sizes acc. to customer request.
- Sintered PE plates are also available if customer needs.



# **Applications**

- Chemical: fine filtration in chemical process like: sulfuric acid silicon, H2O2, phosphoric acid, methanol, ethanol, acetone, and so on
- Pharmaceutical: Decolor, RO Exchanger, pre-filter of ultra Filtration
- Food & Beverage: Pure water, Beer, Rice Wine, Water purification of beverage
- Others: water treatment, Oil & Gas, power plant water treatment, etc.

# CMI CODE TABLE For example: CMI ISPE 02 10 20 S01

Brand Name	Product Name	Filtration Rate	Diameter (mm)	Length (mm)	Connection
СМІ	ISPT	02 (0.2micron) 10-10 micron	10	20	Standard 222(01) Standard 226 (02) N (nonstanrad)







#### **Sintered PTFE Cartridge**

CMI sintered PTFE cartridge is made of pure PTFE material, sintered by high temp, and pressure, which makes it good anti-acid, anti-alkali, and good strength. It is named as "king of cartridge".

#### **Features**

- Good anti-acid, anti-alkali
- Working temp. could be higher than 200 deg C
- High porosity: more than 50%. Sintered metal cartridge is normally less than 30%. So with same filtration area, the flow rate of PTFE cartridge is much bigger.



- Smooth surface: The surface is as smooth like wax. Meanwhile, outside surface filtration is higher than inside part, this makes dirt particle cannot easily go into inside and will be easily to clean the cartridges.
- Good strength: PTFE sintered cartridges are not easily broken. This is to solve the weakness of metal sintered cartridges.
- High filtration rating: PTFE sintered cartridge could have 0.3 um, even lower than 0.1um, which sintered metal cartridge cannot have.
- No particle release: no additional pollution to the filtration liquid, so it is very often used in pre filter of pharmaceutical industry.
- Good anti-ozone: after high temp. and pressure sintering, this cartridge is better in anti-ozone than PTFE pleated membrane cartridge, which makes it widely used in ozone sterilization in pharmaceutical, food, water treatment and so on.

### **Applications**

- Chemical: fine filtration in chemical process like: sulfuric acid silicon,
- H2O2, phosphoric acid, methanol, ethanol, acetone, and so on
- Pharmaceutical: Decolor, RO Exchanger, pre-filter of ultra Filtration
- Food & Beverage: Pure water, Beer, Rice Wine, Water purification of beverage



### CMI CODE TABLE For example: CMI ISPF 02 10 20 S01

Brand Name	Product Name	Filtration Rate	Diameter (mm)	Length (mm)	Connection
СМІ	ISPT	03 (0.3 micron) 10-10 micron	10	20	Standard 222(01) Standard 226 (02) Standard M20 (03) N (nonstanrad)



# A

#### Self-sealing porous plastic filter

CMI UHMW-PE cartridges are made of material with Mol. wt. bigger than 3 million.

Compared with normal PE, UHMW-PE is better in anti-acid, anti-alkali, even better in temp. lower than 80 deg C. And it is more flexible than normal PE.



#### Pore-forming Principle:

Similar as powder metallurgy porous material, pore is formed by the bridges between each particle. It is labyrinth structure, several pores lay out a filtration pore size.

#### Main Data

Product: Self Sealing Filter

Material: PE

Manufacturing Type: Sintered FilterApplication: Hospital suction liner bags

Spec.: Can Taylor-Made acc. to customer requirements

Working Temp.: 100 deg C

• Filtration Rating: 0.3--50 (Micron)

Diameter: 20--100 (mm)

Main Character: Anti-Acid Anti-Alkali, Anti-Water



### **Working Principle**

Self-sealing porous filter, the surface of the filters will be self-sealed after soaking into water. It's applied in medical oxygen cylinder, suction liner bags, suction liner bottles which are used in hospital to collect waste liquid from patient who is performing surgical operations. The self sealing filter can protect the hospital vacuum end and make the operation safely.

## CMI CODE TABLE For example: CMI OFS 1 20 N

Brand Name	Product Name	Filtration Rate	Diameter (mm)	Standard or Non standard
СМІ	AOF	03 (0.3micron) 1 (1 micron) 10 (10micron)	20	S(standard,no other special requirement) N (nonstandard)

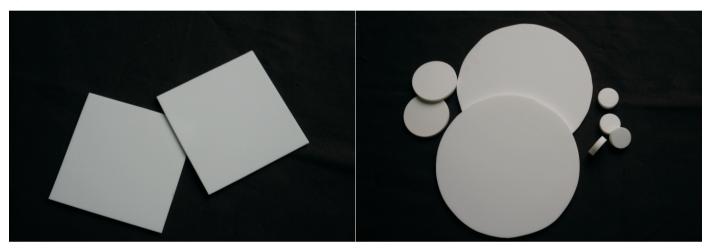


#### **CMI Hydrophobic Ventilated Filter**

CMI PTFE Hydrophobic Ventilated Filter is a kind of porous material sintered by PTFE. It is breathable, hydrophobic, oleophobic, dust-preventing, and so on. So it could be widely used in the application like: precision instruments, battery, etc. The dimension can be manufactured acc. to customer needs.



#### Sintered PE/PTFE sheets



We manufactured sintered PE/PTFE sheet, plates also. Sizes can be tailor made acc. to customer request. Precision is from 0.5micron up to 200micron based on different products.

#### **Other Products**



- Mufflers & Silencers
- Compressed Air Oil-Water Separator Filter

