

## SEE Cartridge

(Polypropylene Support Type)

**A high flow rate made possible by a combination of a polysulfone membrane, a high porosity rate, and an asymmetric membrane structure. Prewashed with ultra-pure water to facilitate the recovery of resistivity.**

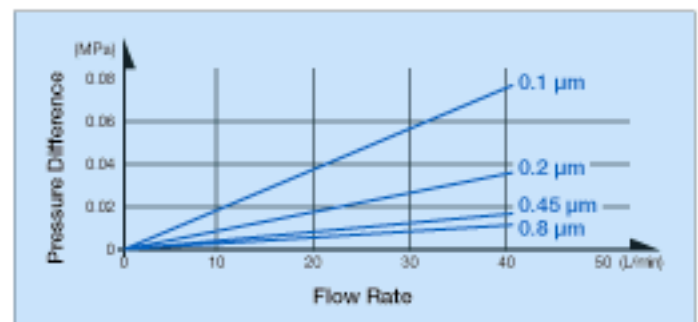
### Specific Features

1. By virtue of the use of a polysulfone membrane featuring a high porosity rate of approximately 80% and a distinctive asymmetric cross-sectional profile, low water-flow resistance has been achieved. This translates into a high flow rate.
2. Since the cartridge is prewashed with ultra-pure water, resistivity recovery can be done with minimal flushing before use.
3. Featuring particle-capturing performance equal to that of the AstroPore PSE Cartridges, the AstroPore SEE Cartridge lineup comes in four pore sizes; 0.1 μm, 0.2 μm, 0.45 μm and 0.8 μm.
4. Resistance to alkalis has been enhanced thanks to the adoption of polypropylene as material for non-woven cloth.
5. In addition to G type, the SEE Cartridge's seal-type lineup includes P type, M type, and MP type to meet a wide range of filtering needs.

### Major Applications

For filtration of acids, alkalis, plating solutions, photoresist developing fluids, various kinds of corrosive chemicals, pure water, water used in the food industry, etc.

### Flow Rate Characteristics



### Table of Performance Characteristics

Item	Unit	Performance				Remarks
Pore size	μm	0.1	0.2	0.45	0.8	
Size	Length					(Note 1)
	Outer diameter	70				
	Inner diameter	26				
Max. differential pressure	25°C	0.54 (Positive pressure)				(Note 2)
	25°C	0.34 (Back pressure)				
Max. heat resistance	°C	90 (70 for Double- and Triple-length versions of the G type)				
Applicable pH range		1 ~ 14				(Note 3)

(Note 1) See the Size table below.

(Note 2) Do not apply back pressure except for instantaneous application.

(Note 3) In case of chemical fluid filtration, a pre-test should be performed under users' own condition.

Type		Single (10 inches)				Double (20 inches)				Triple (30 inches)			
Shape		G type	M type	P type	MP type	G type	M type	P type	MP type	G type	M type	P type	MP type
Overall length	Without gasket	244	257	313	308	496	509	565	559	748	761	817	811
	With gasket (when gasket thickness is 6 mm)	252	—	—	—	504	—	—	—	756	—	—	—

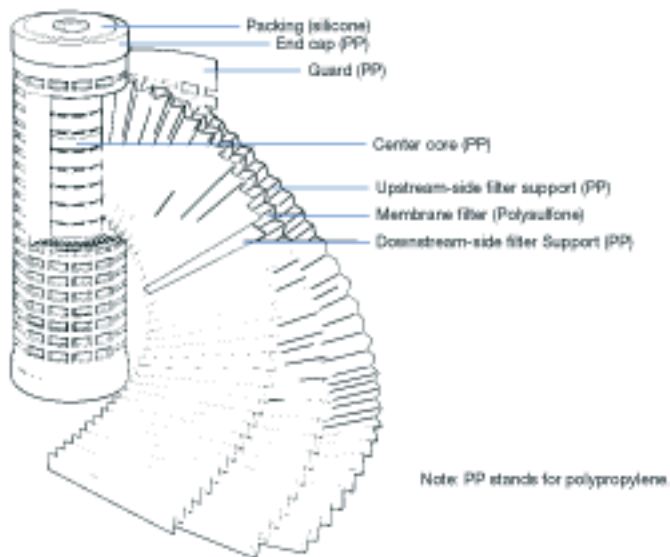
(Notes) G type - Flat packing sealing method

M type - Outer O-ring (AS568-222) sealing method

P type - Outer O-ring (AS568-226) sealing method MP type - Outer O-ring (AS568-222) sealing method, equipped with fin

## Construction and Materials

Pre-filter support of polysulfone membrane and two layers are pleated together and integrated into the cartridge structure by the thermal fusion bonding method. (Example: G type cartridge)



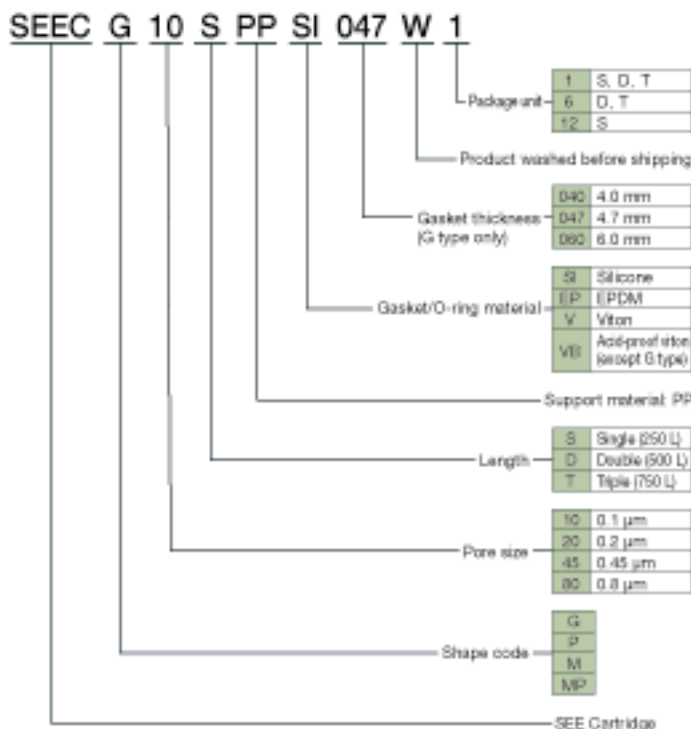
## Chemical Resistance

The data presented below were obtained from 24-hour immersion tests at room temperature. Please check the chemical compatibility with respect to your actual operating conditions before use.

Classification	Chemicals	Compatibility
Hydrocarbons	Benzene	×
Halogenated Hydrocarbons	Trichloroethylene	×
Ethers	Ethyl ether	×
Glycols	Propylene glycol	○
Alcohol	Methanol	○
	Ethanol	○
	Isopropanol	○
	Benzyl alcohol	×
Ketones	Acetone	×
Esters	Ethyl acetate	×
Others	Nitric acid (6 mol/L)	○
	Sulfuric acid (3 mol/L)	○
	Hydrochloric acid (6 mol/L)	○
	Sodium hydroxide (6 mol/L)	○
	Aqueous ammonia (1 mol/L)	○

○ — Compatible × — Incompatible

## Product Codes



## Sterilization Process

The AstroPore SEE Cartridge can be subjected to sterilization repeatedly. Sterilization should be performed at regular intervals to ensure reliable and consistent bacterial removal and to maintain filtration performance.

Hot-water sterilization ..... 90°C

Chemical sterilization

- Hydrogen peroxide ..... 5%
- Formalin ..... 1%
- Sodium hypochlorite .... 10 ppm (chlorine water)