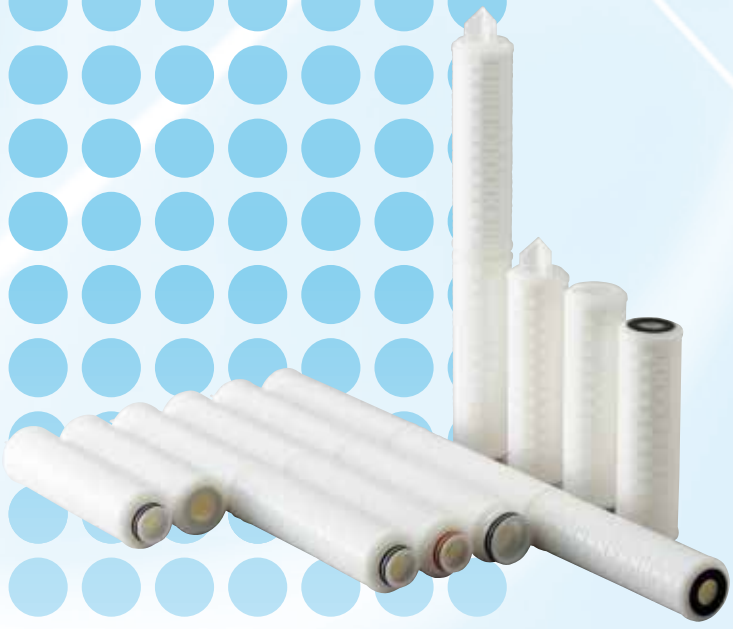
ADVANTEC®

NYLON CARTRIDGE FILTERS

TCNM (Membrane) Type /
TCN (Nonwoven Fabric) Type

TCN Type



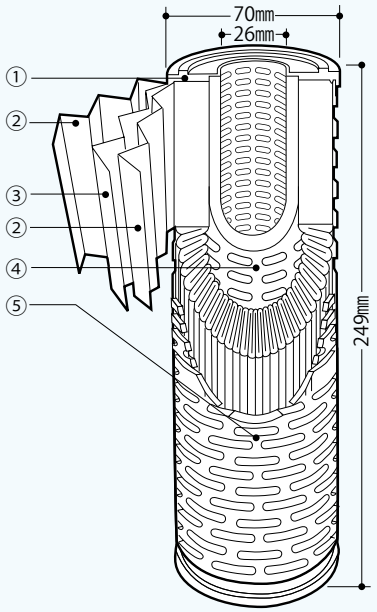
TCNM Type

ADVANTEC TOYO KAISHA, LTD.

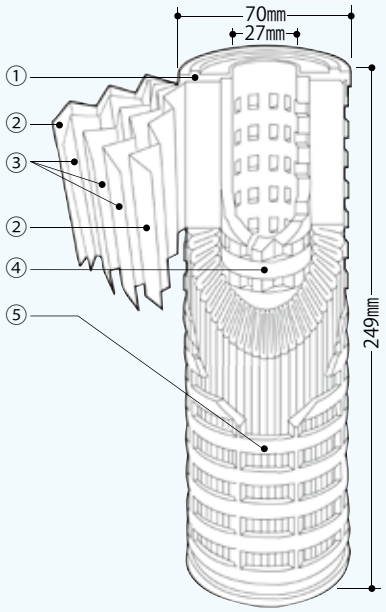
NYLON CARTRIDGE FILTERS

TCNM (Membrane) Type / TCN (Nonwoven Fabric) Type

■ TCNM Type Composition



■ TCN Type Composition



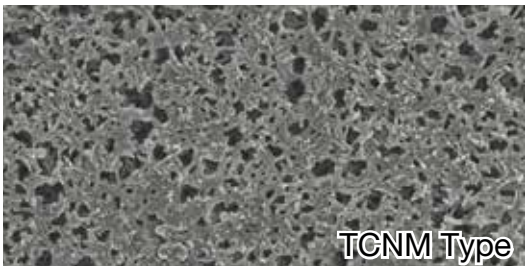
■TCNM Type Materials

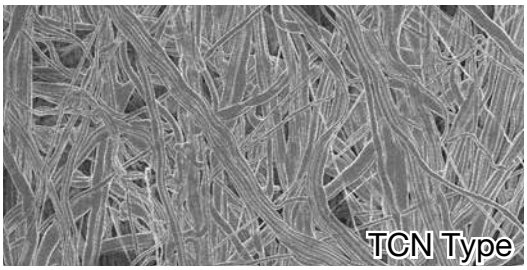
① Endcap	:	High-density Polyethylene
② Support Media	:	High-density Polyethylene
③ Membrane Filter	:	Nylon66 (Supporting Material: Polyester)
④ Core	:	High-density Polyethylene
⑤ Protector	:	High-density Polyethylene

■TCN Type Materials

① Endcap	:	High-density Polyethylene
② Support Media	:	Nylon 6
③ Filter	:	Nylon 6
④ Core	:	High-density Polyethylene
⑤ Protector	:	High-density Polyethylene

■Surface of the Filter (Electron Micrography)





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TCNM (Membrane) Type / TCN (Nonwoven Fabric) Type

○ In order to filter organic solvents, use a stainless housing for grounding to prevent static charge.

These nylon membrane and nonwoven fabric cartridge filters are highly chemical resistant and clean. Hydrophilic media eliminates the need for pre-wetting process with alcohol to filter water solutions.

Features

●Hydrophilic Media

Nylon cartridge filters do not require pre-wetting process with alcohol to filtrate water and other liquid with high surface tension. This reduces the amount of waste solution in the initial stage of filtration and increases work efficiency.

●High Cleanness

Hydrophilic media does not contain wetting agents, which maintains high cleanness.
All TCNM type products are flushed with ultrapure water. Therefore, their elution potential is low and they maintain cleanness in PGMEA used in the microelectronics industry.

●High Reliability

All TCNM type cartridge filters undergo integrity test to ensure high reliability.

Product Name

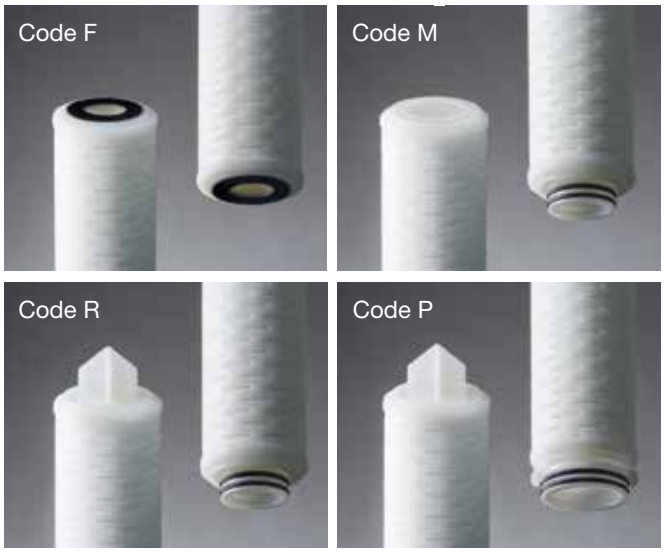
TCNM – □ □ 3 □ □
TCN – □ □ 3 □ □

Pore Size	Pore Size
020	1
045	

Code	Length (mm)
S	250
D	500
T	750

Code	Cartridge Filter Shape
F	Please check photos for details of the shape of each cartridge filter.
M	
R	
P	

Code	Gasket O-ring Polymer
E (Standard)	Ethylene Propylene
D	EPDM
N	Chloroprene
B	NBR
S	Silicone
V	FPM
H (Gasket only)	PTFE
F (O-ring only)	FEP Jacket



Applications

●Filtration of photoresist and other functional resins
●Filtration of pure water and ultrapure water in the microelectronics field
●Microfiltration of high purity chemicals
●Filtration of organic solvents and polar solvents

TCNM (Membrane) Type Specifications

Product Name	TCNM-020	TCNM-045
Pore Size (μm)	0.20	0.45
Filtration Area (cm^2/250 mm type)	9,300	9,000
Maximum Differential Pressure*	0.39MPa(25°C)	
Maximum Operating Temperature*	50°C	

TCN (Nonwoven Fabric) Type Specifications

Product Name	TCN-1
Nominal Rating	1 μm
Filtration Area (cm^2/250 mm type)	3,600
Maximum Differential Pressure*	0.39MPa(25°C)
Maximum Operating Temperature*	40°C

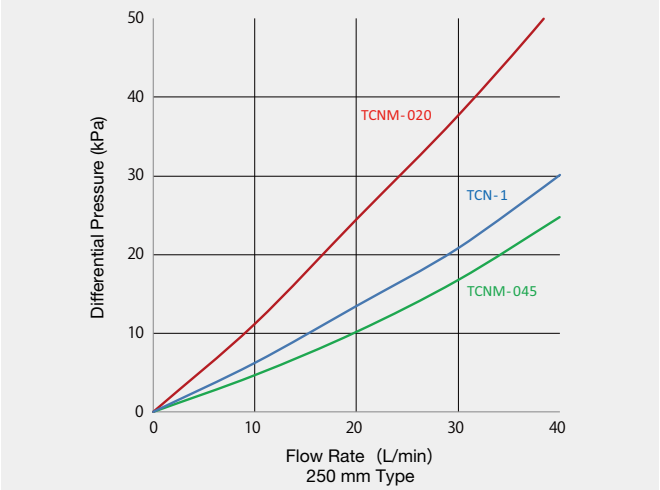
* Maximum differential pressure and maximum operating temperature are set based on the results of test using water. These may differ depending on the combination of chemicals, differential pressure, temperature, and time; therefore, we recommend testing before use.

● This product is made of plastic and may deteriorate over time. In particular, long exposure to fluids containing oxidants such as chlorine may cause oxidative deterioration and lower the strength of filters and support media. The level of deterioration may differ depending on the conditions of temperature and pressure, and type of chemicals. Please ensure the periodic replacement of filters when using the products under severe conditions.

NYLON CARTRIDGE FILTERS

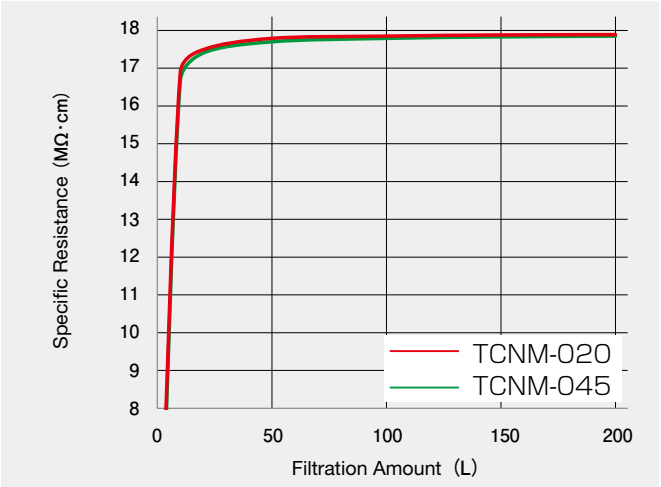
TCNM (Membrane) Type / TCN (Nonwoven Fabric) Type

■Typical Flow Rate (Water)



≪Testing Conditions≫
Pipe: 3/4 in. Housing: 1TWA-1S-FS
Water Temperature: 20°C

■Specific Resistance Recovery Rate



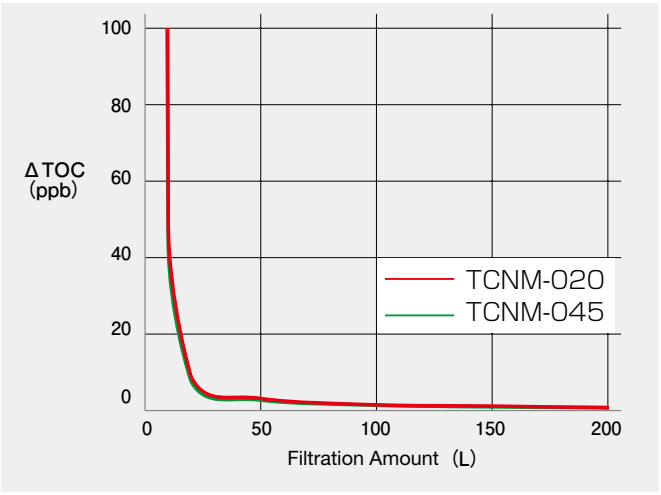
≪Testing Conditions≫
Test: Water, Specific Resistance 17.9MΩ・cm～18.0MΩ・cm
Flow Rate: 10L/min

■Particle Retention Performance (Standard)

Product Name	Particle Size			
	0.5 μm	0.8 μm	1 μm	1.2 μm
TCN - 1	84 %	99 %	99.9 %	> 99.9 %

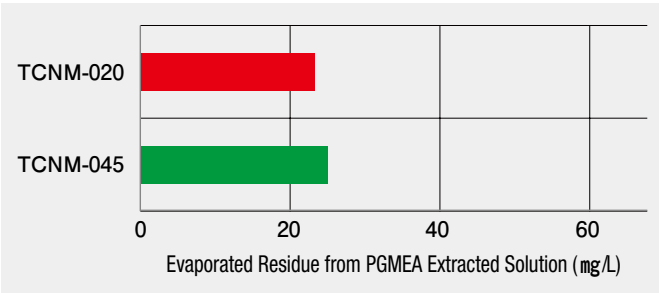
● Particle retention when filtering standard latex dispersion water (10L/min, 250mm type)

■TOC Recovery Rate



≪Testing Conditions≫
Test Solutions: Water, TOC 3ppb~4ppb
Flow Rate: 10L/min

■PGMEA Extraction Test



≪Testing Method≫
Immerse a 250 mm type cartridge filter into PGMEA, produce extract liquid at 35°C for 72 hours, and evaporate and dry the extract.

Toward the Future of Science
ADVANTEC®

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