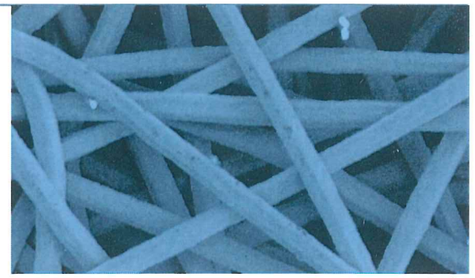
METAL FIBER

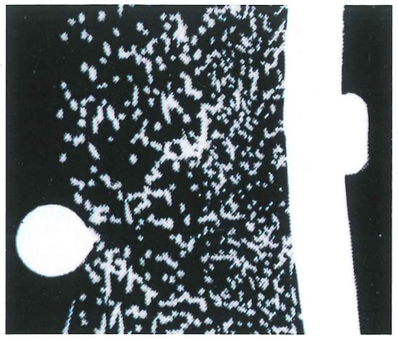
Sintered metal fiber web with high precision and low pressure drop

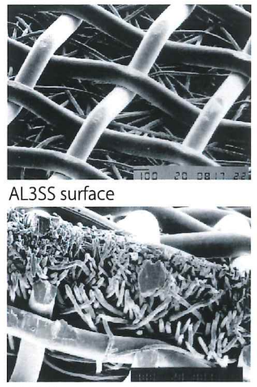
METAL-FIBER is a non-woven sintered medium made of ultra fine metal fibers. While a sintered wire mesh is surface filter medium, it is a depth filter medium. Due to the construction, its dirt holding capacity is superior. And it provides high-speed filtration, and saves pressure

Advantages

- The high porosity makes pressure drop lower. High dirt holding capacity permits longer life.
- Due to a three-dimensional web of tiny fiber in a non-woven labyrinth structure, it not only holds containment but separates gel as well.
- High heat and pressure resistance
- Can be cleaned and reused. Cleaning methods include backwashing, ultrasonic cleaning, chemical cleaning and pyrolysis.







AL3SS surface

AL3SS cross section of surface

Specifications

■ Material

Standard material: SUS316L

In some filtration rate, special material such as Inconel® 601, Alloy HR (correspondent to Hastelloy®), Fecralloy® are available.

■ Processing

Can be processed into various shapes; disk, candle, pleats(except DL4)

■ Size of panels

Standard Size: 750 mm x 1,180 mm

■ Special orders

We can provide a special specification depending on your request, strength and pressure drop condition etc. You are welcome to ask.

■ Applications

polymer industry (high viscosity polymer filter, packfilter, monomer and oligomer filter), chemical industry, pharmaceuticals, food and beverage, aircraft, and last chance filter



FILTERS FOR POLYMER FILTRATION

* Hastelloy® is a registered trademark of Haynes International. Inc.

* Inconel® is a registered trademark of Special Metals Corporation.

METAL FIBER

Sintered metal fiber web with high precision and low pressure drop

Standard Specification

AL3

AL3 has high dirt holding capacity because of a surface prefilter. Relatively less clogging makes the filter lifecycle longer. (CL4 and DL4 are the same) And in the case of polymer filtration, effective gel elimination is achieved by its depth filtration mechanism.

TYPE	Filtration rate (μm)	average brethability [at200Pa] (/min/cm²)	Resistance Coefficient (l/m)	Thickness (mm)	Weight (g/m²)	Porosity (%)	Dirt Holding Capacity (mg/cm²)
3AL3	3	0.10	6.54E+08	0.37	975	67	7.20
5AL3	5	0.34	1.92E+08	0.37	600	80	6.51
7AL3	7	0.62	1.06E+08	0.29	600	74	5.06
10AL3	10	1.08	6.06E+07	0.34	600	78	6.89
15AL3	15	1.80	3.64E+07	0.38	600	80	10.41
20AL3	20	2.65	2.47E+07	0.51	750	82	12.06
25AL3	25	3.25	2.01E+07	0.62	1050	79	17.20
30AL3	30	4.50	1.45E+07	0.62	1050	79	21.12
40AL3	40	6.20	1.06E+07	0.62	1200	76	24.11
60AL3	59	13.50	4.85E+06	0.65	750	86	36.57
75AL3	79	16.13	4.06E+06	1.05	1200	86	94.18

CL4

Compared with AL3, CL4 has higher compression resistance against high hydraulic pressure. A superior on-stream life is assured, so CL4 suits for a leaf disk filter for polymer filtration and a candle filter (including pleated type). Improving cleanability ensures longer life of product.

TYPE	Filtration rate (μm)	average brethability [at200Pa] (/min/cm²)	Resistance Coefficient (l/m)	Thickness (mm)	Weight (g/m²)	Porosity (%)	Dirt Holding Capacity (mg/cm²)
5CL4	5	0.32	2.05E+08	0.42	900	73	6.43
7CL4	7	0.54	1.21E+08	0.42	900	73	9.50
10CL4	10	0.75	8.73E+07	0.42	900	73	8.90
15CL4	15	1.80	3.64E+07	0.42	900	73	9.29
20CL4	20	2.30	2.85E+07	0.42	900	73	12.32
25CL4	25	2.94	2.23E+07	0.48	1050	73	12.06

DL4

DL4 has high performance as well as CL4, and moreover its compression resistance is improved against higher fluid pressure. Especially, it is suitable for the leaf disk filter for high-viscosity polymer filtration.

TYPE	Filtration rate (μm)	average brethability [at200Pa] (/min/cm²)	Resistance Coefficient (l/m)	Thickness (mm)	Weight (g/m²)	Porosity (%)	Dirt Holding Capacity (mg/cm²)
2DL4	2	0.03	2.18E+09	0.38	1500	51	2.20
3DL4	3	0.13	5.03E+08	0.69	1500	73	6.80
5DL4	5	0.24	2.73E+08	0.67	1500	72	7.74
7DL4	7	0.43	1.52E+08	0.67	1500	72	10.50
10DL4	9	0.53	1.23E+08	0.67	1500	72	7.51
12DL4	12	0.85	7.70E+07	0.67	1500	72	12.80
15DL4	15	1.35	4.85E+07	0.67	1500	72	9.13
20DL4	19	1.65	3.97E+07	0.67	1500	72	13.42
25DL4	25	2.20	2.97E+07	0.84	2055	70	—
30DL4	30	3.50	1.87E+07	0.76	1500	75	12.75
40DL4	40	6.25	1.05E+07	0.75	1500	75	24.52

■ Support mesh

All type can be reinforced by sintering support wire mesh as bellow.

S-mesh : SUS316L φ0.13mm×48 mesh

K-mesh : SUS316L φ0.25mm×40 mesh

■ Special orders

Special specifications are available depending on your needs and requirements.

calculation fomula of pressure drop

$\Delta P = 1.67 \times 10^{-1} \times \alpha \mu Q$

ΔP : Pressure drop (Pa) μ : Viscosity (Pa・s) L : Thickness (mm)

α : Resistance coefficient (m^{-1}) Q : Flow rate (L/min/cm²)

NICHIDAI FILTER CORPORATION

http://www.nichidaifilter.co.jp/

Phone (81)774-88-6319

E-mail filter@nichidai.co.jp

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