



Sintered Felt

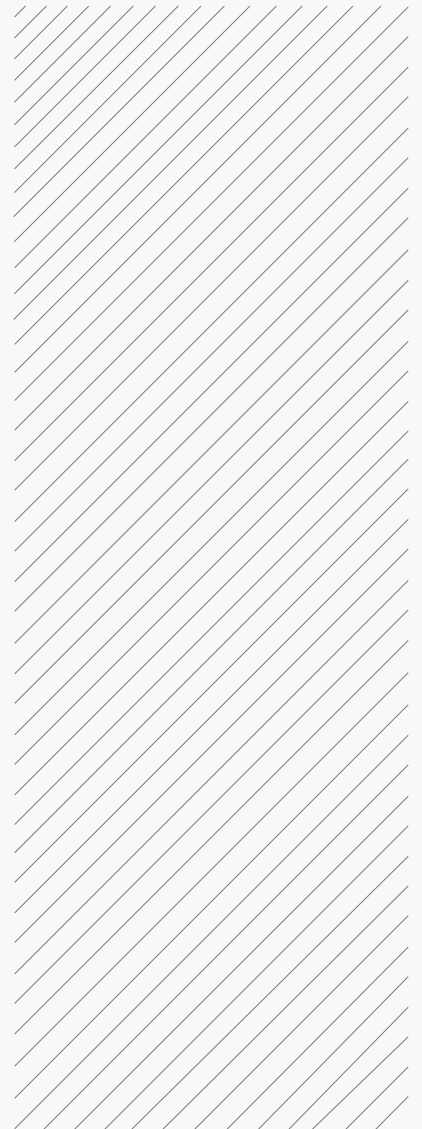
Weave Impossible to Possible



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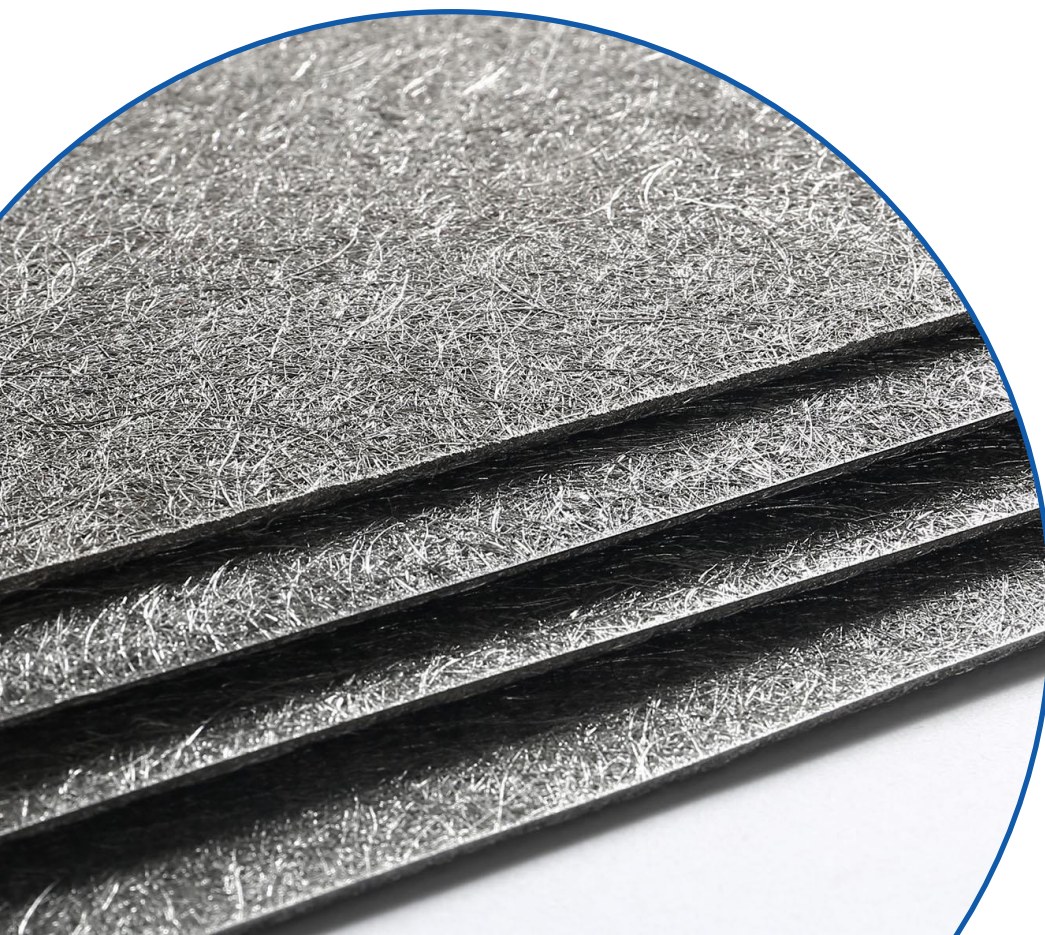


Sintered felt has high porosity and delivers high permeability and low pressure drop when filtering impurities.

Sintered felt is made of stainless steel, FeCrAl and other metal fibers with a diameter of micro rating by sintering in high temperature and welding after special non-woven laying and laminating.

Multilayer sintered felt is composed of different pore size layers to form gradient and deliver higher porosity, permeability, filter rating and dirt holding capacity than single layer sintered felt. Sintered mesh often acts as the main filtration layer in filtration applications and works with woven mesh as the protection layer. It can be pleated to increase the filter area and improve the filtration efficiency.

Sintered felt can be fabricated into filter elements of various shapes, such as cylindrical, pleated or round shape. It plays an important role in the filtration applications of various industries due to its precise filter rating.



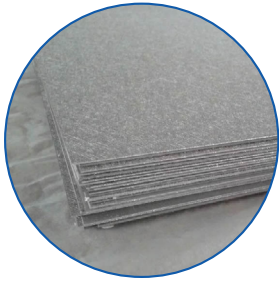
Sintered Felt

SINTERED FELT

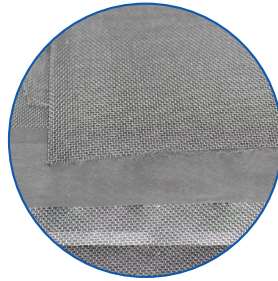
Category

According to the structure, sintered felt can be divided into sintered felt with woven mesh and sintered felt without woven mesh.

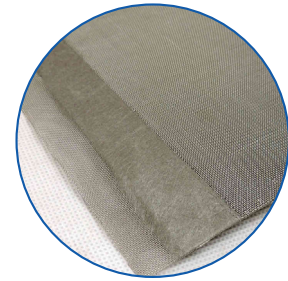
- Sintered felt with woven mesh, also known as sintered metal fiber felt, is a new type of filtration material made of extremely fine multiple layers of metal fibers that are sintered. It has higher filtration accuracy and better dirt holding capacity.
- Sintered felt with woven mesh is divided into sintered felt with single-layer woven mesh or sintered felt with double-layer woven mesh. Place one or two layers of stainless steel woven mesh on ordinary sintered felt and then sinter, which can increase the strength and better protect the filtration performance of the sintered felt.



Sintered felt without woven mesh



Sintered felt with single-layer woven mesh



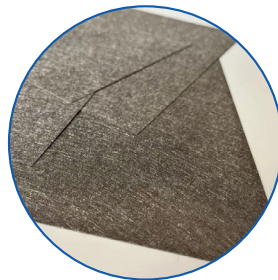
Sintered felt with double-layer woven mesh

According to the material, sintered felt can be divided into stainless steel sintered felt, titanium sintered felt, nickel sintered felt, etc.

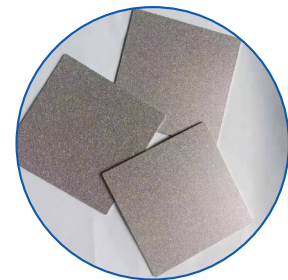
- **Stainless steel sintered felt.** It is made of stainless steel fibers bonded (sintered) by grinding, laminating, and high temperature diffusion, with high heat and corrosion resistance performance, high porosity, and long service life.
- **Titanium sintered felt.** It is a titanium sintered felt with a porosity of about 70%, featuring reliable quality, good uniformity, high permeability, long service life, and high cost performance.
- **Nickel sintered felt.** It is a felt made of finely spun nickel fibers with unique properties, including high temperature resistance performance, corrosion resistance performance, and mechanical properties. It is widely used in a variety of industrial and commercial applications, such as insulating materials, gaskets, insulation panels, and other mechanical components.



Stainless Steel Sintered Felt



Titanium Sintered Felt



Nickel Sintered Felt

SINTERED FELT

Specification

Material: stainless steel (304, 316L, 314, etc.), FeCrAl, etc.

Maximum operating temperature: 600 °C; FeCrAl: 1000 °C.

Filter rating: 1–60 μm

Porosity: about 85%

Standard size:

- 500 mm × 1000 mm,
- 600 mm × 1000 mm,
- 600 mm × 1200 mm,
- 1000 mm × 1000 mm,
- 1000 mm × 1200 mm,
- 1000 mm × 1480 mm,
- 1180 mm × 1450 mm,
- 1180 mm × 1500 mm

Specification of Stainless Steel Sintered Felt

Absolute Filter Rating (μm)	Bubble Point Pressure (Pa)±8%	Air Permeability (L/min/dm ²) ±10%	Porosity (±5%)	Dirt Holding Capacity (mg/cm ²) (±10%)	Thickness (mm) (±10%)	Breaking Strength (MPa) (±10%)
5	6800	47	75	5.0	0.30	32
7	5200	63	76	6.5	0.30	36
10	3700	105	77	7.6	0.37	32
15	2600	205	80	8.0	0.40	23
20	1950	280	81	15.5	0.48	23
25	1560	355	80	18.4	0.62	20
30	1300	520	80	25.0	0.63	23
40	975	670	78	25.9	0.68	26
60	650	1300	87	35.7	0.62	28

- Bubble point test according to ISO 4003.
- Air permeability test according to ISO 4022.

Technical Conditions of High-Pressure Type Sintered Felt

Absolute Filter Rating (μm)	Bubble Point Pressure (Pa)±8%	Air Permeability (L/min/dm ²) ±10%	Porosity (±5%)	Dirt Holding Capacity (mg/cm ²) (±10%)	Thickness (mm) (±10%)	Breaking Strength (MPa) (±10%)
20	2050	280	82	18	0.68	33×+20%
25	1500	350	80	20	0.66	30×+20%
30	1240	500	78	27	0.61	32×+20%
40	960	650	78	35	0.61	36×+20%

- Bubble point test according to ISO 4003.
- Air permeability test according to ISO 4022.
- High pressure type sintered felt: compared with standard sintered felt, it is a thickened sintered felt applied with a certain pressure to get a higher dirt holding capacity and porosity.

Performance Parameter of Nickel Sintered Felt

Thickness (mm)	1–3
Porosity (%)	95–98
Unit Weight (g/m ²)	300–1000
Filter Rating (μm)	100–700
Specific Surface Area (cm ² /cm ³)	(0.5–2) × 105
Tensile Strength (MPa)	5–8
Elongation (%)	≥ 8

Performance Parameter of Titanium Sintered Felt

Raw Material	GR1 titanium fiber
Size (mm)	Customized (0.2/0.4/0.6/0.8)
Shape	Customized (polygon, round, ring, disc, etc.)
Porosity (%)	60–80

SINTERED FELT

Features & Application

Features

- Extreme high porosity, low pressure drop
- Multi layers 3D structure
- In-depth filtration property
- Great high temperature resistance
- High dirt holding capacity, long replacement period
- Easy to mold, fabricate and weld

Application



Polymer Filtration

- Polymer sintered filter production
- Polymer leaf disc filter production



Chemical Filtration

Sintered felt candle filter production



Hot Gas Filtration

Sintered felt filter bag production



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