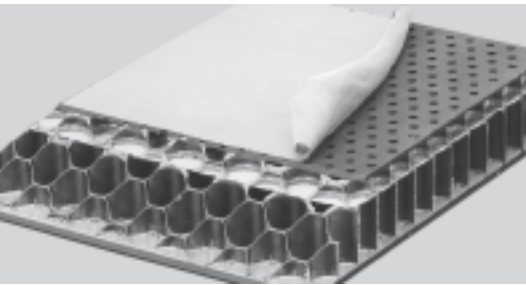


**Metal Mesh**

**S E F A R**  
■ ■ ■ ■



With Sefar Filtrations 175 + years in the filtration business we understand that our customers have varying needs in their wire cloth products. To best meet these needs we developed 4 lines of wire cloth products:

### **Sefar METAL MESH™**

Top value product that meets ASTM standards for industrial applications.

### **Sefar METAL MESH SELECT™**

Far exceeds industry norms for the most demanding applications.

### **Sefar METAL MESH DFARS™**

Certified product and documentation to comply with DoD requirements.

### **Sefar METAL MESH RAYL™**

Certified product for aerospace sound attenuation applications.

Our wide variety of application specific products, combined with the most extensive testing program available, assure you that we have the best product at the right price for your needs.

Sefar METAL MESH™ is the top value for most industrial applications with a cost effective product that meets standard industry specifications. Our quality system includes alloy testing both at the mill and our distribution centers. We provide certifications of this testing at your request. Eliminate your quality concerns with Sefar METAL MESH™

Sefar METAL MESH SELECT™ far exceeds industry norms and can be used in the most demanding applications. This precision woven cloth exceeds the highest standards worldwide at an affordable price. Bring profit back to your high end applications with Sefar METAL MESH SELECT™

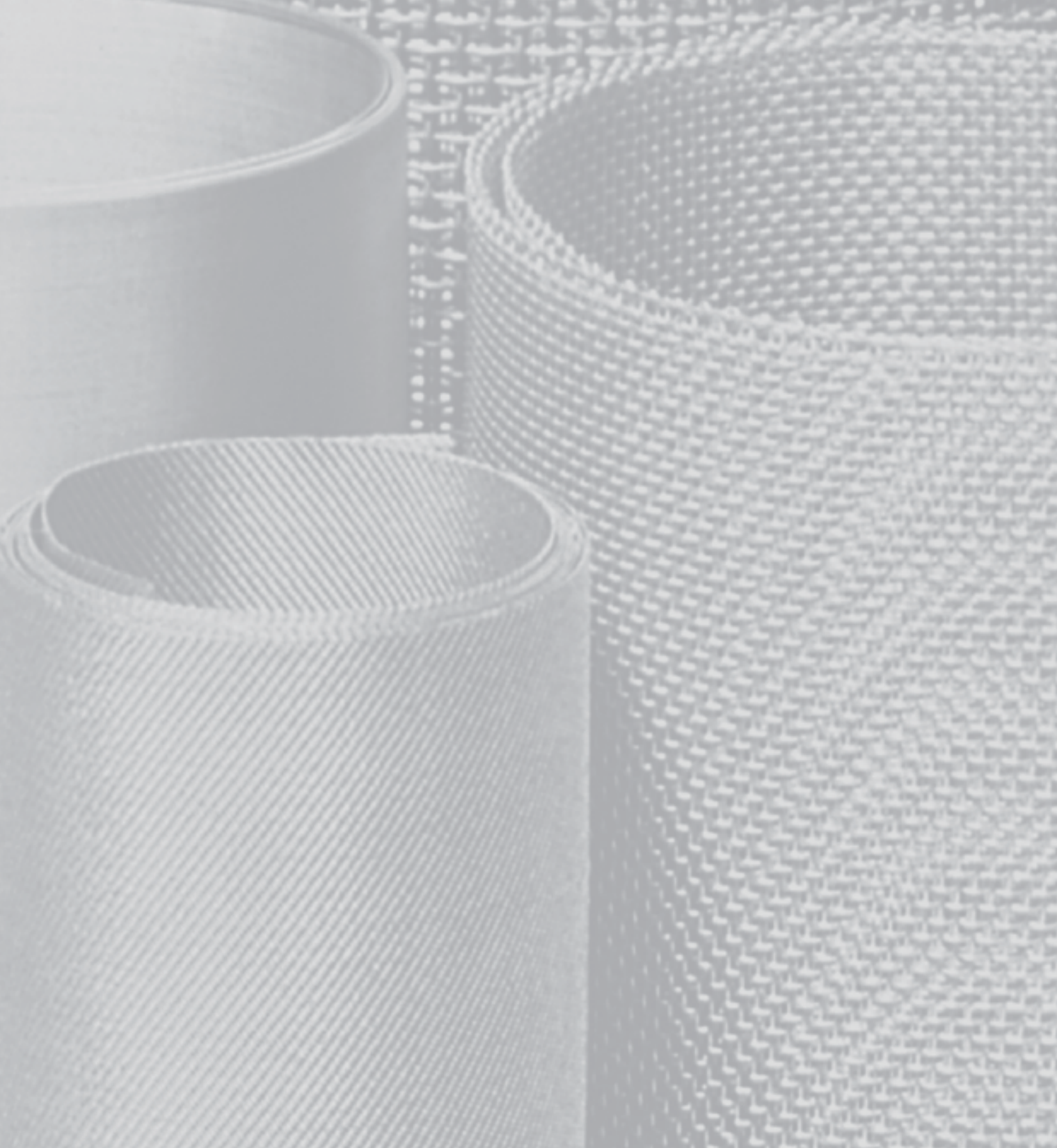
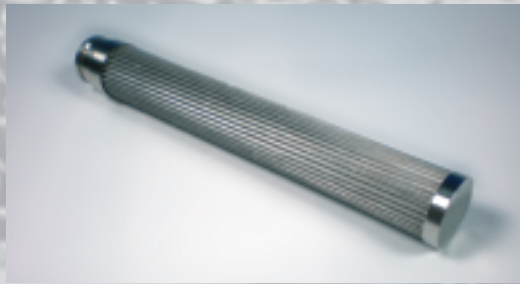
Sefar METAL MESH DFARS™ guarantees you the correct products and documentation needed to comply with DoD requirements. Sefar's high standards, traceability and proven controls allow you to rest assured you are meeting your requirements with Sefar METAL MESH DFARS™

Sefar METAL MESH RAYL™ sets the industry standard for aerospace sound attenuation. Our RAYL rated mesh has been used by leading aircraft manufacturers and designers since the 1960's. Today we have updated this offering with in-line testing and rating procedures as well as improved production. Be better than your competition at a lower cost with Sefar METAL MESH RAYL™

In addition to providing the best array of wire cloth options, Sefar's METAL MESH range is available to you in rolls or can be fabricated to your specifications.

Our capabilities include:

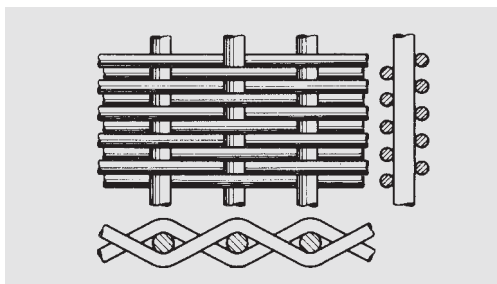
- Cleaning
- Slitting
- Annealing
- Stamping
- Sintering
- Tubing
- Calendering
- Laser / Water Jet cutting
- Coating
- Welding
- Bending / Folding
- Pre-tension Frames and Stretching
- Various Edge Treatments and Grommets



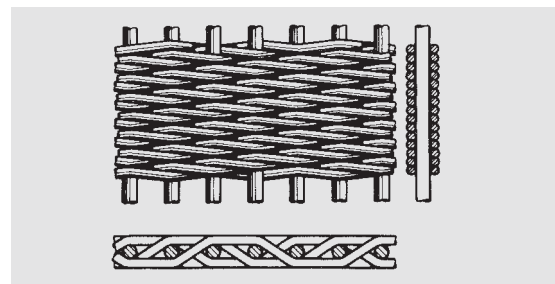


## Dutch Closed Weaves

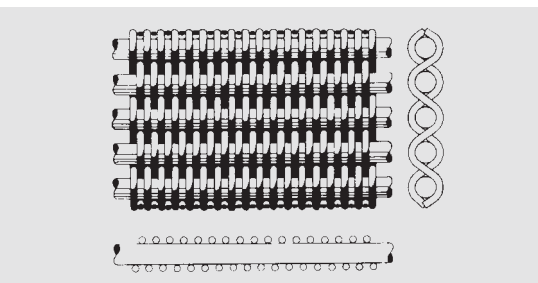
For filtration applications Sefar carries an extensive range of closed dutch weaves. Their warp and weft wire diameters are different in size and the weft wires are positioned close together to provide high density cloth with good strength. Unlike square weaves, dutch weaves do not have straight-through openings. With fluids consequently traveling a tortuous path, the weave is highly effective in capturing solids. The properties that make Dutch Weave wire cloth an excellent filter medium are accurate and uniform pore size, excellent formability, high tensile strength, narrow pore size distribution, good cleanability, no particle migration and good flow rates.



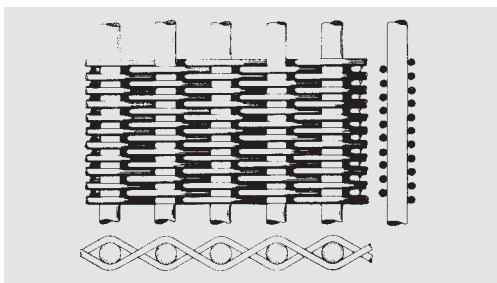
**Plain Dutch Weaves** — Plain Dutch Weaves can handle high flow rates with relatively low pressure drop. They are woven with each warp and weft wire passing over-and-under one wire. The weft wires, however, are smaller in diameter than the warp wires and are driven close together to create a dense weave.



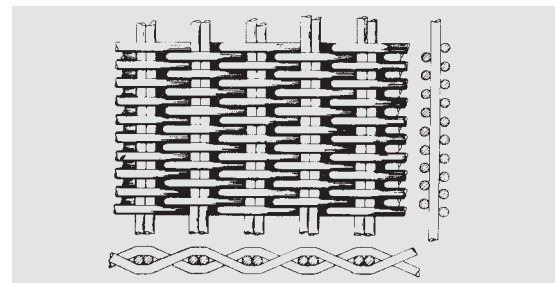
**Twill Dutch Weave** — This weave is used for the finest particle size retention. The warp and weft wires pass alternately over two and under two wires. There are two variations of this weave: Twill Dutch Double Weave and Twill Dutch Single Weave. The weft wires in a Twill Dutch Double Weave are positioned so close that there is always a weft wire above and below each warp wire. This creates a weave with completely covered warp wires. The resulting geometry of the flow-path is very tortuous, providing excellent particle size control. In a Twill Dutch Single Weave the weft wires are not as close together as in the Twill Dutch Double Weave.



**Reverse Plain Dutch Weave** — The warp and weft wires are reversed from those in a Plain Dutch Weave. The warp wires have a smaller diameter than the weft wires and touch each other, while the heavier weft wires are woven as tightly together as possible.



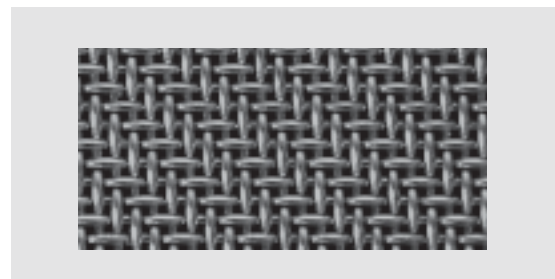
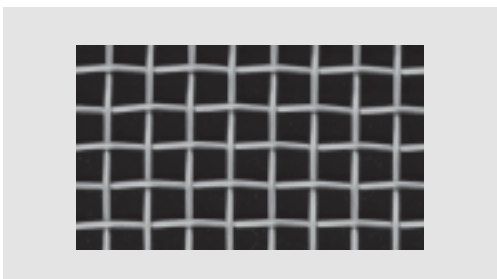
**Alphamesh®** — Although similar to a Plain Dutch Weave, Alphamesh® has far superior performance characteristics. A larger portion of solids is retained on the surface of the cloth than with other Dutch Weaves. This results in a higher contaminant tolerance and excellent backflushing properties. Alphamesh® also has more open area and higher flow rates than all other Dutch Weaves.

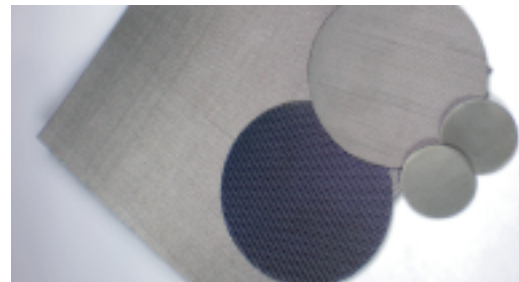
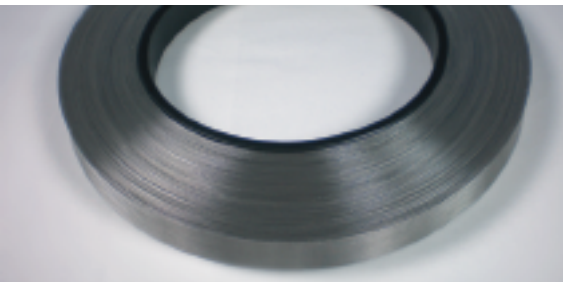


**Plain Dutch Weave - Twin Warp** — The Twin Warp Weave is stronger than conventional Plain Dutch Weaves with the same micron rating. Although similar to a Plain Dutch Weave, it has two small-diameter warp wires in place of one large warp wire.

## Plain and Twill Open Weaves

For sieving, sizing and support applications Sefar carries an extensive range of mesh counts and wire sizes in plain and twill weave wire cloth. Most sizes are available in aluminum, brass, copper, stainless steel, plain steel and other alloys and metals. We can also custom weave to meet your particular specifications.





## Metals and Alloys

### Stainless Steel Alloys

**Type 304** — Good for a wide range of applications. Resists attack by fruit juices, acetic and nitric acids, dairy products, alkalis and many other corrosive agents. Has nominal 18% Chromium and 8% Nickel.

**Type 316** — Similar to Type 304 but adds molybdenum for better corrosion resistance especially to salts and acids. Also provides increased strength at high temperatures.

**Type 304L & 316L** — These alloys have extra low carbon content. This is useful for welding to maintain the corrosion resistant properties of the material.

**Type 430** — Unlike the 300 series this alloy is magnetic. Less resistant to corrosion than the 300 series. Contains nominal 17% Chromium.

Other Stainless Steel types available upon request (Types 317, 321, 347, etc.).

**Carbon Steel** — Least expensive metal used for wire cloth. Has good tensile strength, impact resistance and low abrasion. Without a suitable protective coating carbon steel is susceptible to rust and acid attack.

### Copper and Copper Alloys

**Copper** — Excellent electrical and thermal conductivity, non-magnetic and anti-sparking. Most useful for its resistance to the atmosphere, sea water, alkaline

solutions and organic chemicals. Has low tensile strength and poor abrasion resistance. Poor resistance to acids.

**Commercial Bronze** — Often used for wire cloth exposed to salt atmosphere. 90% Copper, 10% Zinc.

**Phosphor Bronze** — Strong with superior resistance to fatigue and good corrosion resistance. This alloy of Copper, Tin and Phosphorus can have various levels of tin (4%-10%). Not for use with hydrochloric acid or strong oxidizing agents.

**Brass** — Has better abrasion resistance as compared to Copper or Brass, lower electrical conductivity and better corrosion resistance (decreasing with increasing zinc content). Available grades are High Brass (Cartridge Brass) which is 70% Copper, 30% Zinc and Low Brass, which is 80% Copper, 20% Zinc.

### Nickel and Nickel Alloys

**Nickel 200** — Highly resistant to corrosive and oxidizing environments. Has high thermal and electrical conductivity. Nickel 200 is nominal 99.0% nickel. Nickel 201 has low carbon for higher temperatures (over 600F).

**Monel 400®** — High strength and good corrosion resistance with good weldability. Versatile alloy used across many applications, temperatures and conditions. Nominal 63% Nickel and 31% Copper.

**Inconel 600®** — Great resistance to heat and corrosion with high strength. Used in high temperature applications. Has nominal 72% Nickel and 15.5% Chromium.

**Inconel 625®** — High strength, corrosion and oxidation resistant and non magnetic. Has high strength in a large temperature range from cryogenic to 1800F. Has nominal 61% Nickel, 21.5% Chromium and 9% Molybdenum.

**Hastelloy C-276®** — High corrosion resistance particularly in reducing or oxidizing environments and good high temperature properties. High resistance to pitting. Has nominal 57% Nickel, 16% Molybdenum and 15.5% Chromium.

### Aluminum

**AL 1100** — Basically pure aluminum with low weight and moderate strength.

**AL 5056** — Greater corrosion resistance than pure aluminum with added strength. Primarily used in aerospace applications. Adds magnesium, manganese and chromium.

### Other Metals & Alloys

**Titanium** — Excellent strength to weight ratio with excellent corrosion resistance at high temperatures.

In addition to the more common materials above wire cloth can be woven from virtually any metal or alloy that can be drawn into wire. Contact us for availability.

### Metal and Alloy Properties

Metal or Alloy	Aluminum (5056)	Brass High (70-30)	Brass Low (80-20)	Bronze Commercial (90-10)	Bronze Phosphor	Copper	Monel®	Nickel	Steel Carbon	Steel 304
Resistance to Acids										
Oxidizing	B	D	D	D	D	D	C	C	D	A
Reducing	D	D	D	C	C	B	B	B	D	D
Resistance to Alkalis	D	D	D	C	C	B	B	B	B	B
Oxidation Resistance	A	C	C	C	C	B	B	B	D	B
Abrasion Resistance	D	D	D	D	D	D	B	C	C	C
Fatigue Endurance	C	D	D	D	C	D	B	-	B	A
Weldability	B	B	B	B	B	B	B	A	B	B-C
Electrical Conductivity	C	C	C	B	C	A	D	C	C	D
Specific Gravity	2.64	8.53	8.67	8.80	8.80	8.94	8.84	8.89	7.84	7.93
Melting Point °F	1055	1750	1830	1910	1880	1980	2460	2644	2700	2635

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**Buffalo**

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