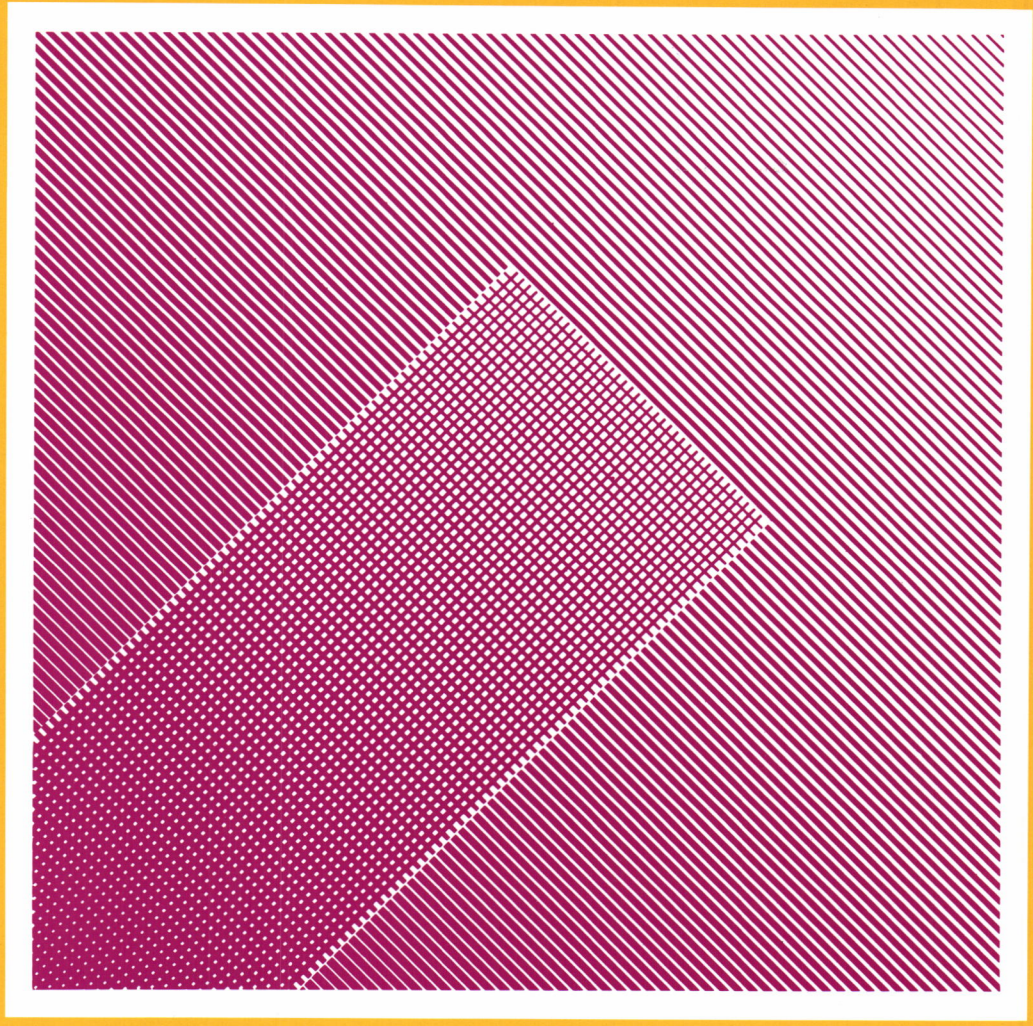
# WIRE CLOTH

S.W.N.



PLAIN WEAVES
TWILL WEAVES
FILTER CLOTH

Coarse to
Extra-fine Meshes

SAKAKURA WIRE & WIRE NETTING CO., LTD.
1-11, 7CHOME, SHIMAIZUMI, HABIKINO CITY, OSAKA, JAPAN

# WIRE CLOTH TERMINOLOGY

**MESH :** Number of wires per lineal inch, measured from center of wire to center of wire.

**SQUARE MESH :** Mesh is identical in both warp (vertical) and shute (horizontal) directions.

**OFF COUNT :** A mesh which has a greater number of wires per inch in one direction—usually the shute direction, (100×90, 50×40).

**WIRE DIAMETER :** Normally referred to in decimal parts of an inch, a determining factor in the mesh count, (0.025", 0.0085", 0.0021").

**WARP WIRES :** Wires running the length of the woven cloth.

**SHUTE WIRES :** Wires running perpendicular to the warp wires—sometimes referred to as "fill".

**OPENING :** The dimension between parallel adjacent wires, usually in decimal parts of an inch.

**OPEN AREA :** The percent of opening for a given mesh utilizing a given wire diameter.

**PLAIN WEAVE :** Pattern where each wire goes alternately over and then under each successive wire.

**TWILLED WEAVE :** Pattern where each wire goes alternately over two wires and then under two successive wires.

**FILTER CLOTH :** Wire mesh having a greater number of wires in the shute direction and also utilizing a finer wire diameter in the shute direction. It is woven in both the plain weave pattern and the twill weave pattern.

**MATERIALS :** Stainless Steel, Brass (65/35alloy), Monel 400, Nickel 200, Commercial Bronze, Phosphor Bronze, Copper, Steel & Others.

**MARKET GRADE :** Meshes with a wire diameter which are normally woven and stocked.

**SELVAGE :** The finished woven edge of wire cloth. Where a "selvage edge" is a specific requirement, it shoud be so specified.

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# Wire Cloth Tolerance Tables

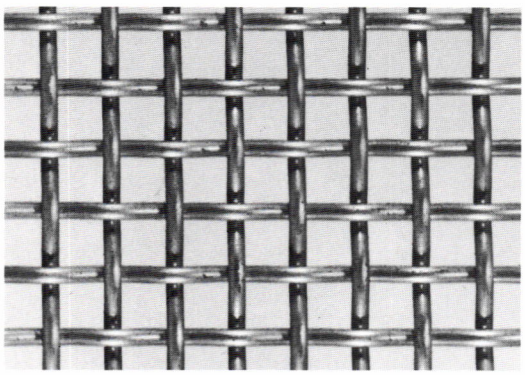
## Mesh Count Tolerances

| Mesh Count | Wire Count Tolerance per Lineal Inch | |
|---|---|---|
| | Warp | Shute |
| Under 30 | ±2% | ±5% |
| 30 to 200 | ±2% | ±4% |
| Over 200 | ±3% | ±4% |

## Wire Diameter Tolerances

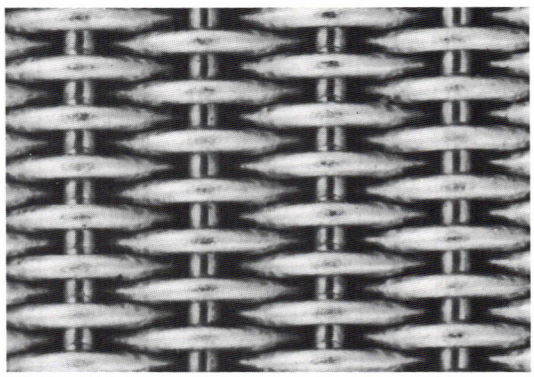
| Stainless Steel and Non-Ferrous Metals | |
|---|---|
| Wire Diameter Inches | Tolerance Inches |
| .4375 to .063 incl. | ±.0015 |
| .054 to .047 incl. | ±.001 |
| .041 | ±.0008 |
| .035 | ±.00075 |
| .032 | ±.0006 |
| .023 to .020 incl. | ±.0005 |
| .018 to .012 incl. | ±.0004 |
| .011 to .008 incl. | ±.0003 |
| .0075 to .0045 incl. | ±.00025 |

# TYPES OF WEAVES



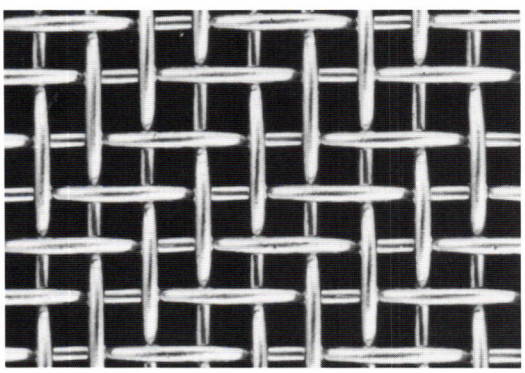
## PLAIN WEAVE

This is the simplest form of weave and the one in most common use. In plain weaving each shute wire alternately goes over and then under the warp wires.



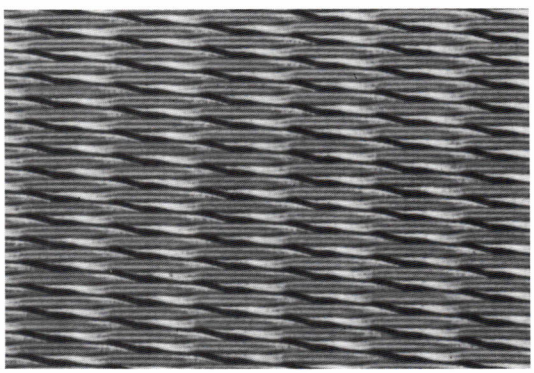
## PLAIN FILTER CLOTH

The weaving itself is identical with plain weave. The differences are that the warp wires are heavier and the lighter shute wires are crimped and tight against the warp wires. resulting in a small triangular opening.



## TWILLED WEAVE

In this weave each shute wire alternately goes over two warp wires and under two warp wires. By "staggering" the interlacing, a diagonal weave is produced.

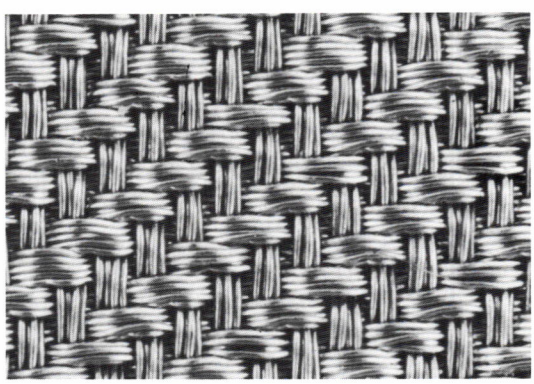


## TWILLED FILTER CLOTH

The only differences between twilled and plain filter cloth are in the wire sizes and in overlapping the shute wires, which gives twice the number of wires per inch.

## OTHERS

WIDTH: 2" TO 120"
MESH: 2 TO 635
STYLE: ROLLS PIECES
STRIPS (SLIT) DISCS



## STRANDED WEAVE

Both warp and shute are of several wires rather than single wires. They are then woven twill, resulting in exceptionally strong and tight mesh cloth. Rolling increases the density. Since both sides are indentical there is no "front and back" to the cloth.

# MARKET GRADE TABLE

## WOVEN WIRE CLOTH

| MESH | WIRE DIAMETER | | WIDTH OF OPENING INCH | % OF OPEN AREA | MESH | WIRE DIAMETER | | WIDTH OF OPENING INCH | % OF OPEN AREA |
|---|---|---|---|---|---|---|---|---|---|
| | MM | INCH | | | | MM | INCH | | |
| 2 | 1.6002 | 0.0630 | 0.4370 | 76.4 | 90 | 0.1270 | 0.0050 | 0.0061 | 30.1 |
| 3 | 1.3716 | 0.0540 | 0.2790 | 70.1 | 100 | 0.1143 | 0.0045 | 0.0055 | 30.3 |
| 4 | 1.1938 | 0.0470 | 0.2030 | 63.9 | 120 | 0.0940 | 0.0037 | 0.0046 | 30.7 |
| 5 | 1.0414 | 0.0410 | 0.1590 | 63.2 | 130 | 0.0864 | 0.0034 | 0.0043 | 31.1 |
| 6 | 0.8890 | 0.0350 | 0.1320 | 62.7 | 140 | 0.0737 | 0.0029 | 0.0042 | 34.9 |
| 8 | 0.7112 | 0.0280 | 0.0970 | 60.2 | 150 | 0.0660 | 0.0026 | 0.0041 | 37.4 |
| 10 | 0.6350 | 0.0250 | 0.0750 | 56.3 | 160 | 0.0635 | 0.0025 | 0.0038 | 36.4 |
| 12 | 0.5842 | 0.0230 | 0.0600 | 51.8 | 170 | 0.0610 | 0.0024 | 0.0035 | 35.1 |
| 14 | 0.5080 | 0.0200 | 0.0510 | 51.0 | 180 | 0.0584 | 0.0023 | 0.0033 | 34.7 |
| 16 | 0.4572 | 0.0180 | 0.0445 | 50.7 | 200 | 0.0533 | 0.0021 | 0.0029 | 33.6 |
| 18 | 0.4318 | 0.0170 | 0.0386 | 48.3 | 220 | 0.0432 | 0.0017 | 0.0028 | 38.7 |
| 20 | 0.4064 | 0.0160 | 0.0340 | 46.2 | 240 | 0.0406 | 0.0016 | 0.0026 | 38.3 |
| 24 | 0.3556 | 0.0140 | 0.0277 | 44.2 | 250 | 0.0406 | 0.0016 | 0.0024 | 36.0 |
| 30 | 0.3302 | 0.0130 | 0.0203 | 37.1 | 300 | 0.0381 | 0.0015 | 0.0018 | 29.7 |
| 40 | 0.2540 | 0.0100 | 0.0150 | 36.0 | 325 | 0.0356 | 0.0014 | 0.0017 | 30.0 |
| 50 | 0.2286 | 0.0090 | 0.0110 | 30.3 | 400 | 0.0279 | 0.0011 | 0.0014 | 31.4 |
| 60 | 0.1905 | 0.0075 | 0.0092 | 30.5 | 508 | 0.0254 | 0.0010 | 0.00098 | 25.8 |
| 70 | 0.1651 | 0.0065 | 0.0078 | 29.8 | 635 | 0.0203 | 0.0008 | 0.00079 | 25.8 |
| 80 | 0.1397 | 0.0055 | 0.0070 | 31.4 | | | | | |

# Properties of Metals

E–Excellent G–Good F–Fair P–Poor

| Metal or Alloy | Resistance to Acids | | Resistance to Alkalis | Oxidation Resistance | Abrasion Resistance | Fatigue Endurance | Weldability | Electrical Conductivity | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|
| | Oxidizing | Reducing | | | | | | | |
| Aluminum (5056) | G | P | P | E | P | F | G | F | 2.64 |
| Brass, High (65-35) | P | P | P | F | P | P | G | F | 8.53 |
| Brass, Low (80-20) | P | P | P | F | P | P | G | F | 8.67 |
| Bronze, Commercial (90-10) | P | F | F | F | P | P | G | G | 8.80 |
| Bronze, Phosphor | P | F | F | F | P | F | G | F | 8.80 |
| Copper | P | G | G | G | P | P | G | E | 8.94 |
| Monel | F | G | G | G | G | G | G | P | 8.84 |
| Nickel | F | G | G | G | F | – | E | F | 8.89 |
| Steel, Carbon | P | P | G | P | F | G | G | F | 7.84 |
| Steel, 304SS | E | P | G | G | F | E | G-F | P | 7.93 |

# FILTER CLOTH

| M E S H | Diameter of wire | | Weave | Retention in Microns (approx) |
|---|---|---|---|---|
| | Warp | Shute | | |
| 10 × 52 | 0.028″ | 0.023″ | Plain | 375 |
| 12 × 64 | 0.023″ | 0.0165″ | 〃 | 335 |
| 12 × 88 | 0.014″ | 0.013″ | 〃 | 330 |
| 14 × 64 | 0.020″ | 0.0165″ | 〃 | 320 |
| 14 × 88 | 0.020″ | 0.013″ | 〃 | 305 |
| 14 × 95 | 0.015″ | 0.012″ | 〃 | 253 |
| 14 × 100 | 0.015″ | 0.012″ | 〃 | 250 |
| 20 × 120 | 0.014″ | 0.010″ | 〃 | 200 |
| 24 × 110 | 0.015″ | 0.010″ | 〃 | 160 |
| 30 × 150 | 0.009″ | 0.007″ | 〃 | 120 |
| 40 × 200 | 0.007″ | 0.0055″ | 〃 | 73 |
| 50 × 250 | 0.0055″ | 0.0045″ | 〃 | 65 |
| 16 × 200 | 0.014″ | 0.010″ | Twill | 130 |
| 20 × 200 | 0.011″ | 0.010″ | 〃 | 110 |
| 20 × 250 | 0.010″ | 0.0085″ | 〃 | 80 |
| 30 × 250 | 0.010″ | 0.008″ | 〃 | 75 |
| 20 × 350 | 0.007″ | 0.006″ | 〃 | 68 |
| 28 × 500 | 0.007″ | 0.0045″ | 〃 | 60 |
| 30 × 500 | 0.008″ | 0.0045″ | 〃 | 57 |
| 50 × 700 | 0.006″ | 0.003″ | 〃 | 50 |
| 80 × 700 | 0.004″ | 0.003″ | 〃 | 43 |
| 165 × 800 | 0.0026″ | 0.0016″ | 〃 | 37 |
| 150 × 800 | 0.0027″ | 0.0021″ | 〃 | 35 |
| 200 × 600 | 0.0021″ | 0.0016″ | 〃 | 30 |
| 150 × 1000 | 0.0027″ | 0.0021″ | 〃 | 25 |
| 165 × 1400 | 0.0026″ | 0.0016″ | 〃 | 21 |
| 200 × 1400 | 0.0021″ | 0.0016″ | 〃 | 16 |
| 325 × 2300 | 0.0014″ | 0.0010″ | 〃 | 8 |

# HOW TO ORDER

When ordering please be sure to include the following :

1. METAL or ALLOY : Stainless Steel, Brass, Monel, etc.
2. MESH : Specify number of meshes per lineal inch.
3. WIRE DIAMETER : In inch or mm; first warp, then shute, if they differ.
4. TYPE OF WEAVE : Plain, Dutch, etc.
5. SIZE : Width and length of rolls or cut-pieces.
6. QUANTITY : Number of rolls or cut-pieces, or square feet required.
7. SPECIAL ORDER : Please specify exactly what you need, if any.

ISO 9001 REGISTERED FIRM

JAB QMS Accreditation RO20 DNV AS REGION JAPAN

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UKAS QUALITY MANAGEMENT 013 DNV Certification B.V. THE NETHERLANDS

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Established 1923

S.W.N.

BRAND


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**Primary Sales Department** 7-1-11, Shimaizumi, Habikino City, Osaka, 583-0881 JAPAN
TEL : 072-930-6861 FAX : 072-939-6970

**Kitano Plant** 1647, Kitano, Yamazoemura, Yamabe Gun, Nara, 630-2211 JAPAN
TEL : 0743-86-0256 FAX : 0743-86-0257

**Nara Plant** 10, Sugao Kokami, Yamazoemura, Yamabe Gun, Nara, 630-2345 JAPAN
TEL : 0743-85-0614 FAX : 0743-85-0516

**Manufacturing Plant** 6-1-22, Shimaizumi, Habikino City, Osaka, 583-0881 JAPAN
TEL : 072-931-2221 FAX : 072-931-2222

**Warehouse** 4-223, Shimaizumi, Habikino City, Osaka, 583-0881 JAPAN
TEL: 072-953-4740 FAX : 072-953-4850