# HSM Wire International, Inc.

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**www.hsmwire.com**


# Weight Conversion Factors

### Methods of Calculating the Weight of Wire Cloth

Weight conversion factors

To find the approximate weight of wire cloth, multiply the weight of stainless steel as listed in the wire cloth tables by the appropriate factor listed below.

| | |
|---|---|
| Aluminum (EC0 and 1100) | .339 |
| Aluminum (5056 | .328 |
| Brass, cartridge (70/30) | 1.065 |
| Brass, low (80/20) | 1.083 |
| Bronze, comm. (90/10) | 1.010 |
| Bronze, phosphor (A) | 1.107 |
| Carpenter® 20CB3 | 1.010 |
| Copper | 1.114 |
| Gold | 2.415 |
| Haynes® 25 (L605) | 1.142 |
| Hastelloy® B | 1.155 |
| Hastelloy® C | 1.117 |
| Hoskins 502 | 1.993 |
| Inconel® 600 | 1.052 |
| Incoloy ® 800 | .994 |
| Molybdenum | 1.277 |
| Monel® 400 | 1.103 |
| Nichrome® | 1.031 |
| Nichrome® I | 1.010 |
| Nichrome® V | 1.052 |
| Nickel 200 | 1.110 |
| Platinum | 2.681 |
| Silver | 1.311 |
| Stainless steel (302, 304, 316, 347) | 1.000 |
| Stainless steel (410, 430) | .990 |
| Steel (1008) | .985 |
| Steel (1042) | .980 |
| Tantalum | 2.072 |
| Titanium | .561 |
| Tungsten | 2.401 |

NOTE: The following registered trademarks are recognized – Hastelloy and Haynes: Haynes International, Inc.; Inconel and Monel: the Inco family of companies; Nichrome: Driver-Harris Co.

### Calculating Clear Opening, Wire Diameter, Center-to-Center Distance, and Open Area Percentage

M = Mesh count (number of wires per lineal inch)
D = Wire diameter
C = Center to center distance, wire to wire
A = Clear opening between wires
$C = {}^{1}_{M}$ A = C – D

Open Area Percent = $(MxA)^2$ x 100

> Example: 4 Mesh/.063” Dia. Wire
>
> C = ¼ = .250”
>
> A = .250” - .063 = .187”
>
> Open Area Percent = $(4 \times .187)^2$ x 100 = 56%

### Metric Users

Because ‘mesh count’ has a direct functional relationship to 1 inch, use the conversion tables provided on our website to convert all metric measurements to inches before using the equations above to perform calculations. The equations above are formulated for metric calculations.

Opening [mm] = (25.4/mesh count) – wire diameter [mm]
Mesh Count = 25.4/(opening [mm] + wire diameter [mm] )

$$\text{Open Area Percent} = \frac{\text{opening [mm]}^2}{(\text{opening [mm]} + \text{wire diameter [mm]})^2} \times 160$$

Area : To convert inches$^2$ to mm$^2$, multiply inches$^2$ x 6.4516
To convert feet$^2$ to m$^2$, multiply feet$^2$ x 9.290304