

Woven Wire Mesh Designations

ISO 4783-1 is the international standard relating to the choice of aperture size and wire diameter combinations.

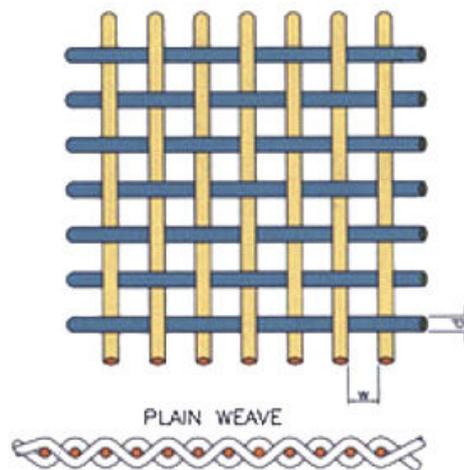
Mesh No.

Mesh number denotes the number of openings or wires per English inch (25.4mm) in both directions counting from the centre of any wire to a point exactly one inch distant.

The wires running lengthways during manufacture are referred to as warp wires, and the wires that run across the width of the cloth are referred to as weft or shoot wires.

Plain Weave (PW)

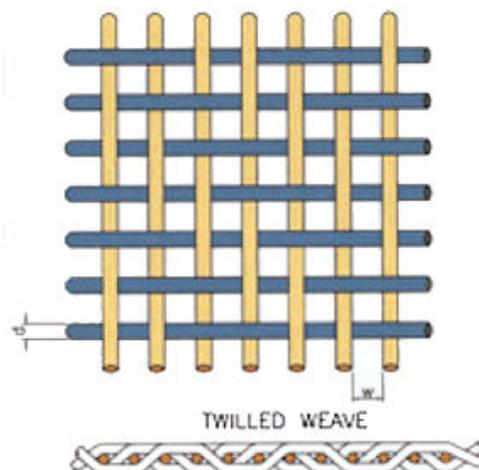
FIG 1



Each weft wire passes over one and under one warp wire, and each warp wire passes over one and under one weft wire.
(See Figure 1).

Twill Weave (TW)

FIG 2



Each weft wire passes over two and under two warp wires, and each warp wire passes over and under two weft wires.
(See Figure 2).

Aperture Width (w)

The distance between two adjacent warp or weft wires measured in the projected plain at mid positions. The aperture width (in mm) is calculated according to the following equation:

$$\text{Aperture width} = \left(\frac{25.4}{\text{Mesh No. (per 25.4mm) inch}} \right) - \text{wire diameter in mm}$$

Open Screening Area (Ao)

Percentage of the surface of all the apertures in the total screening surface calculated using the following equation:

$$A_o = 100 \frac{(w)^2}{(w + d)^2}$$

w = aperture width
d = wire diameter

Mass Per Unit Area (Kg/M²)

The nominal mass per unit area can be calculated from the following equation:

$$A = \frac{d^2 \rho}{618.1 (w + d)}$$

d = wire diameter mm
w = aperture width mm
ρ = density of material Kg/m²

Standard Metals and Alloy Availability

The table below gives a general guide to the standard materials available and their associated wire diameter limitations.

Available Wire Mesh Materials & Associated Limiting Wire Diameters.

Type of Material	Limiting Wire Diameter
Stainless Steel 304,316 and low carbon grades	All specifications
Stainless Steel High Tensile (For Reverse Dutch Weaves)	0.20mm
Plain or Mild Steel	0.132mm
Galvanised Mild Steel	0.17mm
Aluminium	0.224mm
Copper	0.05mm
Brass	0.04mm
Phosphor Bronze	0.035mm
Pure Nickels & Alloys	0.035mm
Pure Silver	All specifications
*Monel 400	0.04mm
*Incoloy, Inconel Heat Resistant Specifications	0.112mm