

Radiopaque Tungsten Wire for Medical Device Applications

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Metal Cutting Corporation's radiopaque tungsten wire is the affordable, biomedical alternative to precious metal wire. That means all the benefits, for a fraction of the cost!

ABOUT

Metal Cutting Corporation has been successfully supplying tungsten wire, both plated and non-plated, round and ribbon to its many international medical device customers for over 30 years. Not only does it provide a significant economic advantage over precious metal wires, its mechanical properties make it ideal for coiling and braiding applications.

CONSIDER

RADIOPACITY Tungsten is as radiopaque as precious metals [compare $W=19.3 \text{ g/cm}^3$ to $Au=19.3 \text{ g/cm}^3$], but far more affordable.

HIGH TENSILE STRENGTH Tungsten's tensile strength is significantly higher than other radiopaque metals, resulting in stiffer coils and more steerable braids.

ATTRACTIVE SURFACE FINISH Tungsten is available with gold plate from 0.3μ to 1.5μ to match the appearance and some of the benefits of pure gold at a fraction of the cost.

CONSISTENT PRICING Gold plated tungsten wire is a highly cost effective alternative to platinum and platinum alloys. And it remains unaffected by speculative pricing (unlike precious metals).

REDUCED RISK As tungsten and gold plated tungsten have minimal commodity value, the risks of theft and mishandling are significantly reduced.

> Density

Tungsten has a density equal to Gold [compare $W=19.3 \text{ g/cm}^3$ to $Au=19.3 \text{ g/cm}^3$] and only slightly lower than Platinum [at 21.4 g/cm^3], making it suitable for radiopaque applications.

> Tensile Strength

Tungsten maintains exceptionally high tensile strength at over 1650° C . [The tensile strength of tungsten at 1000° C is 50,000-75,000 psi].

> Hardness

Tungsten has a mineral hardness of 7.5, while platinum has a hardness of 4.5, and Gold just 2.5. The combination of hardness and tensile strength make for stiffer coils and more steerable braids.

> Heat Resistance

Tungsten has the highest melting point of any metal, at 3410° C , and a boiling point of 5900° C .

> Corrosion Resistance

Tungsten has excellent corrosion resistance, and is only slightly affected by most mineral acids.

> Applications

Tungsten wire can be used in medical device applications such as guide wires and probes, and in cauterization, or as a cost effective replacement for precious metal wires.



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R A D I O P A Q U E

TUNGSSTEIN