

18ct MW White Alloy Properties and Process Data

- Palladium bearing 18ct white gold - used to manufacture all forms of jewellery.
- Nickel free alloy.

Technical Information

Alloy composition:

- Palladium 13%,
- Gold 75.1%,
- Silver 11.85%.

Properties

- Colour White
- Density 16.2g/cm³
- Melting Range 1180 – 1235°C
- Annealed Hardness 100+/- 5HV
- 10% reduction of area 115+/-10HV
- 20% reduction of area 140+/-10HV
- 40% reduction of area 160+/-10HV

Property Annealed

UTS	350 N/mm ²
Elongation	35%
Proof Stress	180 N/mm ²

Process Data

Rolling / Drawing/Stamping:

May be cold worked up to 70% reduction of thickness between anneals.

Annealing:

This alloy may be annealed at 750°C in a furnace, the time depending on size of the workpiece. The alloy may be quenched if necessary.

Casting:

Due to 18ct MW's high melting temperature; care must be taken not to overheat the flask. Silica flasks should not be heated above 750°C to ensure that they do not break down. The casting temperature for this alloy is 1280°C -1350°C, with smaller items requiring temperatures at the upper end of this range. Flask temperatures should be between 600°C -650°C.

Machining:

For best results the alloy must be machined in the coldworked condition.

Solders:

Any of the hallmarking quality 18ct gold solders supplied by Cookson may be used with this alloy.

Enamelling information:

This alloy can be enamelled successfully. Any oxide present or surface imperfection must be removed prior to application.