

## 18ct SW White Alloy Properties and Process Data

- A general purpose white alloy, with high ductility
- Zinc free alloy
- Nickel free alloy

### Technical Information

#### **Alloy composition:**

- 75.10% Gold,
- 7.90% Silver,
- 17.00% Palladium

#### Properties

- Colour White
- Density 16.3 g/cm<sup>3</sup>
- Melting Range 1300-1315°C
- Annealed Hardness 70 +/-10 HV
- 10% reduction of area 115 +/-10 HV
- 20% reduction of area 145 +/-10 HV
- 40% reduction of area 185 +/-10 HV

#### **Property Annealed**

Vickers Hardness	70 +/- 10 HV
UTS	350 N/mm <sup>2</sup>
Elongation	30%
Proof Stress	155 N/mm <sup>2</sup>

#### **Process Data**

##### Rolling / Drawing:

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

##### Annealing:

The alloy may be annealed at 700°C in a furnace, the time depending upon the size of the workpiece. Alternatively it may be heated to cherry red and quenched for maximum ductility.

##### Stamping:

May be given maximum deformation (70% reduction of area) between anneals.

##### Machining:

For best results, machine in the cold worked 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 annealed successfully. Any oxide or surface imperfections must be removed prior to application.