

9ct DF Yellow Alloy Properties and Process Data

- A general purpose yellow gold alloy
- One of the most versatile of all alloys - used extensively for all forms of jewellery fabrication.

Technical Information

Alloy Composition:

- 37.6% minimum Gold,
- 10.3% Silver + Copper & Zinc

Properties

- Colour Yellow
- Density 11.2 g/cm³
- Melting Range 880 - 900°C
- Annealed Hardness 115 +/- 15HV
- 10% reduction of area 150 +/- 15 HV
- 20% reduction of area 180 +/- 15 HV
- 40% reduction of area 225 +/- 15 HV

Property Annealed

UTS	460 N/mm ²
Elongation	40%
Proof Stress	255 N/mm ²

Process Data

Rolling /Drawing/Spinning/Stamping

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

Annealing:

The alloy may be annealed at 650°C in a furnace, the time depending on size of workpiece. Alternatively it may be heated to cherry red and allowed to cool. The alloy may be quenched if necessary from 550°C (black heat) for maximum ductility.

Casting:

The alloy has good form-filling capabilities. A high flow casting version of the alloy is also available (9ctCY).

Machining:

For best results the alloy must be machined in the cold worked condition.

Solders:

Any of the hallmarking quality 9ct gold solders supplied by Cookson may be used with this alloy.

Enamelling information:

Due to the presence of zinc this alloy may not perform satisfactorily when enamelled.