

14ct AY Yellow Alloy Properties and Process Data

- A general purpose yellow gold alloy.
- A versatile alloy - used extensively for all forms of jewellery manufacture.
- Good colour match with 14ct TSC casting alloy.

Technical Information

Alloy Composition:

- 58.6% Gold,
- 5.43% Silver + Zinc & Copper.

Properties

- Colour Yellow
- Density 13.0g/cm²
- Melting Range 830 - 870°C
- Annealed Hardness 100 +/-10 HV
- 10% reduction of area 120 +/-15HV
- 20% reduction of area 155 +/-15HV
- 40% reduction of area 190 +/-15HV

Property Annealed

UTS	440 N/mm ²
Elongation	45%
Proof Stress	200 N/mm ²

Process Data

Rolling / Drawing / Spinning / Stamping:

May be worked up to 70% reduction between anneals.

Casting:

The alloy is suitable for most applications. The casting temperatures range from 930 -1020°C, with fine/detailed work requiring casting temperatures at the top end of the scale. Typical flask temperatures range from 600-650°C.

Annealing:

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

Machining:

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

Solders:

Any of the hallmarking quality 14ct 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.