

18ct HB Yellow Alloy Properties and Process Data

- The Classic British, 18ct Medium Yellow, general purpose alloy.
- Widely used by jewellers and goldsmiths for all applications.

Technical Information

Alloy Composition:

- 75.1% gold
- + 15.97% silver + copper.

Properties

- Colour 2N
- Density 15.5 g/cm³
- Melting Range 905 – 960°C
- Annealed Hardness 120 +/- 10 HV
- 10% reduction of area 150 +/- 10 HV
- 20% reduction of area 180 +/- 10 HV
- 40% reduction of area 215 +/- 10 HV

Property Annealed

UTS	435 N/mm ²
Elongation	48%
Proof Stress	245 N/mm ²

Process Data

Rolling/Drawing/Stamping:

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

Annealing:

Furnace anneal at 650°C or heat with a torch to a dull red colour. Hold at temperature for a minimum time to avoid excessive grain growth. The alloy can be water quenched from 500°C (when all the red colour has gone).

Spinning:

Suitable for most applications, except those requiring major deformation. Consult with Cookson technical staff if required.

Casting:

Suitable for casting, though the more specialised 18ct HCB alloy is generally preferred.

Machining:

Fully hard, cold-worked material should be used for best machining properties.