

18ct KK Yellow Alloy Properties and Process Data

- A general purpose 18ct yellow alloy
- Zinc Free Alloy
- 3N Colour

Technical Information

Alloy Composition:

- 75.10% Gold,
- 12.48% Silver + Copper.

Properties

- Colour Yellow
- Density 15.5g/cm³
- Melting Range 870 - 905°C
- Annealed Hardness 135+/-10HV
- 10% reduction of area 160+/-10HV
- 20% reduction of area 190+/-15HV
- 40% reduction of area 225+/-15HV

Property Annealed

UTS	480 N/mm ²
Elongation	30%
Proof Stress	370 N/mm ²

Process Data

Rolling / Drawing / Stamping / Spinning:

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

Casting:

The casting temperature range for this alloy is 970 – 1055°C. Smaller, delicate castings will require a temperature at the higher end of the range. Can be cast into all forms. Flask temperature ranges from 600-650°C.

Machining:

For best results, the alloy must be machined 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 enamelled successfully. Any oxide or surface imperfections must be removed prior to application.

Chain:

May be manufactured into all chain types.

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 may be water quenched from black heat (500°C).