

| Composition & Melting |       |                 |                 |       |
|-----------------------|-------|-----------------|-----------------|-------|
| Composition           | Cu    | Ag              | Zn              | Ni    |
|                       |       | 52.00%          | 44.00%          | 4.00% |
| Temperatures          |       |                 |                 |       |
| Melting               | Karat | °C              | °F              |       |
| Initial               | 18K   | 1060°C - 1070°C | 1940°F - 1958°F |       |
| Ingot                 | 18K   | 1010°C - 1020°C | 1850°F - 1868°F |       |

- The alloy and fine gold should be melted together in a clean crucible. Place alloy in the bottom of the crucible and fine gold on top.
- Initial melting temperature should be obtained then reduced to the suggested ingot temperatures.
- The alloy should be mixed well with a stirring rod to ensure a good mix.
- Alloy should be poured into a preheated, vertical or lightly lubricated iron mold.
- Use a steady, even pouring motion slowing down at the end of the pour to prevent shrinkage at the top of the ingot.
- Use a round rod mold for wire and a 2-piece L shaped mold for plate and sheet.

### Quenching

- The metal ingot should be removed from the mold and quenched immediately into a pickle solution or water.
- For heavy ingots a one- minute cooling period is recommended to avoid quench cracking.

### Fabrication

- The metal ingot should be cleaned of all adhering oxides or fluxes before rolling.
- The ingot should be rolled or drawn to a 50% reduction in size before annealing.
- After initial annealing continue the reduction at 50% before annealing again.
- Clean the ingot after each anneal.
- Keep rolls, dies and metal clean to prevent defects in the finished stock.

### Annealing

- Annealing temperature is **704°C/1300°F** for **20 minutes** & Quench immediately. Do not over anneal.
- A boric acid fire coat should be applied before annealing in open atmospheres.
- Over annealing can cause excessive grain growth and orange peel effect on the surface.

**Note:** There are proprietary metals in the formulation which are not included in the composition section.

**Technical Assistance:** Available... Call [1-800-999-3463](tel:1-800-999-3463) / [1-800-999-FINE](tel:1-800-999-FINE)

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