

| Composition & Melting | | | | |
|-----------------------|---------|-----------------|-----------------|--------|
| Composition | Cu | Ag | Zn | Ni |
| | | 70.20% | 16.80% | 13.00% |
| Temperatures | | | | |
| Melting | Karat | °C | °F | |
| Initial | 9K- 14K | 1040°C - 1050°C | 1904°F - 1922°F | |
| Ingot | 9K- 14K | 950°C - 980°C | 1742°F - 1796°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 **675°C/1250°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 / 1-800-999-FINE

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