

Physical & Mechanical Properties

| Composition | | Color Coordinates | | | | Density (g/cc) | | As cast Hardness (HV) | |
|-------------|--------|-------------------|-------|------|-------|----------------|-------|-----------------------|-----|
| | | Karat | L* | a* | b* | | | | |
| Cu | 63.50% | 10K 862 | 86.75 | 0.62 | 9.35 | 10K 862 | 11.07 | 10K 862 | 143 |
| Ag | 0.00% | 14K 862 | 86.07 | 1.47 | 9.67 | 14K 862 | 12.62 | 14K 862 | 163 |
| Zn | 17.00% | 18K 862 | 85.83 | 2.35 | 13.14 | 18K 862 | 14.65 | 18K 862 | 188 |
| Ni | 19.50% | | | | | | | | |

Melting & Casting Instructions

| Temperatures | | | |
|--------------|------------|-----------------|-----------------|
| | Karat | °C | °F |
| Pre alloying | 10K | 1090° - 1100° C | 1994° - 2030° F |
| | 14K - 18K | 1050° - 1060° C | 1922° - 1940° F |
| Casting | 10K | 1085° - 1105° C | 1985° - 2021° F |
| | 14K | 1025° - 1045° C | 1877° - 1913° F |
| | 18K | 995 - 1015° C | 1823° - 1859° F |
| Flask | 9K - 18K | 540° - 675° C | 1004° - 1247° F |
| Quench Time | 25 Minutes | Remelting | 70% Fresh Mix |

General Instructions

- Very little *boric acid* flux is recommended. Do not use carbon flux such as soda ash, saltpeter etc. No flux needed in bottom pour automatic casting unit.
- *Flouric based* investment removers are the best for silicon oxide invisible coating. Use of aggressive acid causes corrosion and surface damage. *United's brite cast* investment removers works effectively.
- To calculate the weight of the metal needed (in grams), *multiply density (gm/cc) with weight of wax (grams)*. Add 10% of the total weight for button.
- *Gypsum bonded* investment is recommended. Follow manufacturer's instruction for burnout cycle.

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

Technical Assistance: Always available... Call 1-800-999-3463 / 1-800-999-FINE

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