

### Physical & Mechanical Properties

Composition		Color Coordinates				Density (g/cc)		As cast Hardness (HV)	
		Karat	L*	a*	b*				
Cu	14.90%	10K 570	93.66	-1.84	15.1	10K 570	12.67	10K 570	127
Ag	84.10%	14K 570	92.92	-2.69	20.93	14K 570	14.05	14K 570	109
Zn	1.00%	18K 570	89.9	-1.64	28	18K 570	15.77	18K 570	113
Ni	0.00%								

### Melting & Casting Instructions

Temperatures				
	Karat	°C	°F	
Pre alloying	9K - 18K	1040° - 1050° C	1904° - 1922° F	
Casting	10K	965° - 985° C	1769° - 1805° F	
	14K	995° - 1015° C	1823° - 1859° F	
	18K	1045° - 1065° C	1931° - 1967° F	
Flask	9K - 18K	510° - 650° C	950° - 1202° F	
Quench Time	8 - 12 Mins		Remelting	50% 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

E-mail / [techteam@unitedpmr.com](mailto:techteam@unitedpmr.com) Web-Site / [www.unitedpmr.com](http://www.unitedpmr.com)