

### Physical & Mechanical Properties

Composition		Color Coordinates				Density (g/cc)		As cast Hardness (HV)	
		Karat	L*	a*	b*				
Cu	92.50%	10K 543	86.88	9.71	14.98	10K 543	11.53	10K 543	124
Ag	4.50%	14K 543	85.02	9.51	15.32	14K 543	13.03	14K 543	134
Zn	3.00%	18K 543	84.22	9.6	16.57	18K 543	14.98	18K 543	177
Ni	0.00%								

### Melting & Casting Instructions

Temperatures				
	Karat	°C	°F	
Pre alloying	9K - 18K	1040° - 1050° C	1904° - 1922° F	
Casting	10K	1035° - 1055° C	1895° - 1931° F	
	14K	1000° - 1025° C	1832° - 1868° F	
	18K	980° - 1000° C	1796° - 1832° F	
Flask	9K - 18K	510° - 650° C	950° - 1202° F	
Quench Time	15 Mins (9-14K), 3 mins button first (18K)		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)