

Technical sheet - Alloy 440

Color - Standard Yellow

Purpose - Casting

Karat - 9K - 14K

Physical & Mechanical Properties

Composition		Color Coordinates				Density (g/cc)		As cast Hardness (HV)	
		Karat	L*	a*	b*				
Cu	76.40%	10K 440	90.03	3.78	18.62	10K 440	11.3	10K 440	142
Ag	11.50%					14K 440	12.82	14K 440	146
Zn	12.10%								
Ni	0								

Melting & Casting Instructions

Temperatures			
	Karat	°C	°F
Pre alloying	9K - 14K	1030° - 1065° C	1886° - 1949° F
Casting	10K	970° - 990° C	1780° - 1815° F
	14K	945° - 965° C	1732° - 1770° F
Flask	9K - 14K	510° - 650° C	950° - 1202° F
Quench Time	15-20 Minutes	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

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