



## UNITED ALLOY # 670

Be insured in quality, Be insured in service, Be insured in "United Alloys.

UNITED ALLOY is uniquely different from other available alloys. Combining the highest purity metals available, stringent quality control, special de-oxidizers and grain refiners, produce trouble-free, superior quality castings and fabrication or rolling (hand-made).

UNITED ALLOY # 670 is designed for 14K - 18K Green Gold, which produces a Green Gold Color. This alloy contains De-oxidizers which resist oxygen absorption in melting process and better solidification characteristics to reduce the porosity which improve the quality of casting and provide high luster in finished color and can be used Regular Casting, Stone-In-Place Casting and Rolling (Hand-Made), if desire.

We do recommend pre-graining all alloy and fine gold before casting to assure a uniform mixture.

- 1.) Melt Temperature for Alloying : 1,040 - 1,050 °C
- 2.) Melt Temperature for Casting : 1,020 - 1,040 °C
- 3.) Flask Temperature :

KARAT	WEIGHT	CENTRIFUGAL CAST	VACUUM CAST
14K - 18K	Light	530 - 550 °C	620 - 680 °C
	Medium	490 - 520 °C	550 - 590 °C
	Heavy	450 - 480 °C	480 - 540 °C

- 4.) Quench Time : After casting, wait 8 - 12 minutes before quenching flask.
- 5.) Pickling : United's Brite-Cast<sup>TM</sup> (Ammonium Bi-fluoride), Sparex # 2 (sodium bisulfate), 10% - 20% Sulfuric Acid.  
Rubber gloves and safety glasses are recommended when using acid pickle.
- 6.) Re-using : New alloy and fine gold 50%, Old gold 50%, Cleans Old gold well before re-melting.
- 7.) Specific Gravity : 14K - 14.07, 18K - 15.79
- 8.) Soldering : United Yellow Solder Alloy # 1SA, # 2SA, # 3SA, # 18YSAE or already mixed gold solder sheet.  
Laser welding is recommendation for matching color.
- 9.) Notes : Melt temperature may vary with type of unit.

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