



## UNITED ALLOY # 509

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 # 509 is designed for 18K White Gold, which produces a Premium White Color and can also be used for 18K spring hard casting, if desired. 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.

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

- 1.) Melt Temperature for Alloying : 1,090 - 1,100 °C
- 2.) Melt Temperature for Casting : 1,050 - 1,090 °C
- 3.) Flask Temperature :

KARAT	WEIGHT	CENTRIFUGAL CAST	VACUUM CAST
18K	Light	570 - 600 °C	680 - 720 °C
	Medium	520 - 550 °C	620 - 650 °C
	Heavy	480 - 500 °C	550 - 600 °C

- 4.) Quench Time : After casting, wait 8 - 10 minutes before quenching flask.
- 5.) Pickling : United's Brite-Cast™ (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 70%, Old gold 30%, Cleans Old gold well before re-melting.
- 7.) Specific Gravity : 18K - 14.64
- 8.) Soldering : United White Solder Alloy # 6SA, # 7SA, # 8SA, # 18WSAE or already mixed gold solder sheet.
- 9.) Notes : Melt temperature may vary with type of unit.

---

Representative Office : UNITED PM (THAILAND) CO., LTD.

467/7 2<sup>nd</sup> Floor, Mahatun Rama 3 Center, Rama 3 Road, Bang Khlo, Bang Kho Leam, Bangkok. 10120, Thailand.

Tel : (662) 292 1992, 292 1993 Fax : (662) 292 1994 Mobile 081-751 7384 E-mail : sales@unitedpmthailand.com