



UNITED ALLOY # 191

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 # 191 is designed for 9K - 18K Spring Yellow Gold, which produces a Rich-Yellow Color. This alloy contains Technical Element Metals which increase special hardness in hardening process with flexibility and better solidification characteristics to reduce the porosity, provide high luster in finished color and can be used regular casting and rolling (hand-made).

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

- 1.) Melt Temperature for Alloying : 1,060 - 1,070 °C
- 2.) Melt Temperature for Casting : 1,020 - 1,040 °C
- 3.) Flask Temperature :

KARAT	WEIGHT	CENTRIFUGAL CAST	VACUUM CAST
9K - 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 15 - 20 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 50%, Old gold 50%, Cleans Old gold well before re-melting.
- 7.) Annealing : Coat the jewelry items with boric acid or any oxidation preventing solutions available.
Anneal at 675 °C for 20 minutes followed by water quenching.
- 8.) Hardening : Place in a pre-heated oven set at 370 °C for 2 hour and air cool.
- 9.) Specific Gravity : 9K - 11.35, 10K - 11.67, 14K - 13.16, 18K - 15.09
- 10.) Soldering : United Yellow Solder Alloy # 1SA, # 2SA, # 3SA # 18YSAE or already mixed gold solder sheet.
- 11.) Notes : Melt temperature may vary with type of unit.

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