



## For Casting Grain Use Metal & Flask Temperatures

“Liquidus” is the temperature at which an alloy is fully liquid. “Solidus” is the temperature at which an alloy is fully solid. Between these temperatures is a 2 phase slushy region. To fill your flask, you need a superheat from 30° to 100°C/86° to 212°F above the liquidus. “Superheat” is how much hotter the melt should be to flow into the flask. A general guideline to follow is +30°C/86°F for large pieces, +60°C/140°F for medium pieces and +100°C/212°F for small pieces or intricate pieces. Corresponding flask temperatures of 482°C/900°F, 538°C/1000°F and 593°C/1100°F respectively are also recommended. Models with complex geometry may warrant changes to these guidelines...so be prepared to experiment and adapt to the uniqueness of your particular style! Density is provided to allow for wax compensation.

## Palladium – White Gold

Palladium-white gold alloys are unique. They benefit from significant additions of palladium to create nickel-free white golds that provide the most attractive white colour and the most ease of use in fabrication. Simply adding palladium to a white alloy formula does not necessarily yield optimum results. The objective is to create a nickel-free, malleable, platinum-white material that resolves complaints long associated with the nickel-white alloys currently populating our industry.

Umicore’s palladium-white gold is nickel free, exhibits the whitest colour of any gold product on the market, and has the best performance in all types of jewellery manufacturing. All Umicore palladium white alloys are Grade 1 on the World Gold Council whiteness index.

## Fine Metal

Umicore supplies fine metal in the form of grain (Au or Ag) or mini bars (Au only). If you alloy your own metal and are confident in controlling the sensitive alloying techniques, Umicore is your source for fine gold and silver.

## CASTING GRAIN SPECIFICATIONS

PART NO.	ALLOY	LIQUIDUS	SOLIDUS	DENSITY (g/cm <sup>3</sup> - dwt/in <sup>3</sup> )
GR10YAMP000	10K Yellow	908°C/1666°F	881°C/1618°F	11.28-119.0
GR10RRED000	10K Red	982°C/1800°F	973°C/1783°F	11.44-120.7
GR10KW601000	10K Nickel-White	1073°C/1963°F	1030°C/1886°F	11.23-116.4
GR14YAMP000	14K Yellow	910°C/1670°F	870°C/1598°F	12.79-134.9
GR14GNB000	14K Green	912°C/1674°F	880°C/1616°F	14.02-147.9
GR14RRED000	14K Red	947°C/1737°F	937°C/1719°F	12.92-136.3
GR14KW601000	14K Nickel-White	1030°C/1886°F	1000°C/1832°F	12.73-132.7
GR14DWPD000	14K Palladium-White	1094°C/2001°F	1079°C/1974°F	14.22-150.0
GR18YY08000	18K Yellow	874°C/1605°F	854°C/1569°F	15.32-161.6
GR18W601000	18K Nickel-White	948°C/1738°F	916°C/1681°F	14.78-155.9
GR18GNGC000	18K Green	952°C/1746°F	935°C/1715°F	15.68-165.4
GR18RRED000	18K Red	920°C/1688°F	880°C/1616°F	15.10-159.3
GR18DWPD000	18K Palladium-White	1074°C/1965°F	1064°C/1947°F	15.80-166.7
GR19W601000	19K Nickel-White	920°C/1688°F	902°C/1656°F	15.20-160.4
GR22YY08000	22K Yellow	979°C/1794°F	950°C/1742°F	17.79-187.7
GR90WIR0000	90% Platinum-10% Iridium	1790°C/3254°F	1770°C/3218°F	21.54-227.2
GR95WIR0000	95% Platinum-5% Iridium	1825°C/3317°F	1800°C/3272°F	21.49-226.7
GR95WRU000	95% Platinum-5% Ruthenium	1795°C/3263°F	1780°C/3236°F	20.70-218.4
GRSSW000000	Sterling Silver	893°C/1639°F	810°C/1490°F	10.40-109.7
GRFSW000000	(99.9%) Fine Silver Grain	960°C/1760°F	960°C/1760°F	10.50-110.8
GRSSWANTI00	Arctic Fox™ Anti-tarnish Sterling Silver	867°C/1593°F	824°C/1515°F	10.25-108.2
GR24YFINE00	24K Fine Gold Grain	1064°C/1947.2 °F	1064°C/1947.2 °F	19.3-203.4