
UNITED 90 % PLATINUM 10 % IRIIDIUM CASTING ALLOY

Thank you for using UNITED'S Alloys.

All United Platinum casting alloys are alloyed in High Frequency Induction equipments to insure cleanliness and poured into shots to form uniform beads for ease of melting and use for our customers.

SPECIFICATIONS

90 % Platinum 10 % Iridium

Melting Point – **1790° C / 3254° F**

Specific gravity – 21.56 g/cu cm @ **20° C**

Hardness – 110 Hv Annealed

CASTING

Medium to Heavy Castings - **2000° C / 3632° F**

TEMPERATURE

Light weight detailed Castings - **2100° C / 3812° F**

FLASK

Heavy weight mountings - **1200° - 1400° F**

TEMPERATURE

Medium weight mountings - **1500° - 1600° F**

Delicate Light weights - **1700° - 1800° F**

Check recommended temperature range of type of investment used.

NOTE : Use only ceramic crucibles designed for melting platinum such as Wesgo platinum crucibles. Avoid using acetylene –oxygen gas for platinum, use hydrogen – oxygen or propane – oxygen torches. A strong oxidizing torch flame should be used for melting platinum. If the platinum alloy is melted in an induction furnace, no gas cover is needed. Use phosphate, acid bonded or other investment materials specifically designed for platinum casting and follow the manufacturer's instructions. Give your eyes a chance to rest between melts when casting platinum. Keep the melting area very clean when melting platinum to avoid contamination with other metals. Close attention to sprue design and placement is critical when casting platinum. Wax patterns for Platinum castings are normally attached directly to the sprue base. Platinum alloys will solidify quickly and larger sprues are needed than those used for casting gold or silver alloys. Make sure all investment material is removed from platinum alloys before re-melting the metal. Flux should never be used when melting Platinum alloys.

QUENCH TIME

15 - 20 Minutes. Some casters prefer to cool to a dull red and knock out with a hammer before quenching.

**INVESTMENT
REMOVAL**

J – Break investment remover (Romanoff), Hydrofluoric Acid or Hydrochloric Acid can be used to remove investment from the castings. A mix of 2.50 Lbs of Sodium Hydroxide and 2.50 Lbs of Potassium Hydroxide to 1 gallon of water, put in a steel pan, used hot, will remove investment from platinum castings.

REMELTING

Use a 50 % scrap 50 % fresh mix. Make sure all investment is removed from scrap.

EYE PROTECTION

Wear Proper Eye protection when melting Platinum Alloys, #10 to #12 lenses.

**TECHNICAL
ASSISTANCE**

Always available... Call 1-800-999-3463 / 1-800-999-FINE

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