



# Aussiemet

## AussieCast

### NIPF14

### Technical Chart 9KT

NIPF14 is Nickel & Palladium free white gold alloy for 9-14kt casting. Most suitable applications as below:

- ◆ Can be used in open system casting
- ◆ Can be used in close system casting
- ◆ Can be used in stone in place casting
- ◆ Offers high fluidity and bright oxidation-free castings

#### Physical Characterization Data

|                              |        |
|------------------------------|--------|
| COLOR                        | White  |
| DENSITY [G/CM <sup>3</sup> ] | 11.9   |
| MELTING TEMPERATURE          | 910 °C |
| HARDNESS AS CAST             | 69 HV  |
| HARDNESS AFTER AGE HARDNING  | 98 HV  |

#### Casting Parameter

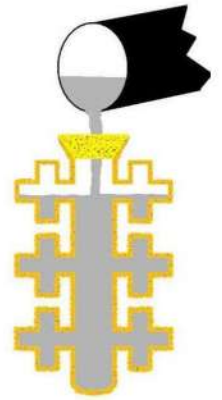
|                            |                   |
|----------------------------|-------------------|
| ALLOYING TEMPERATURE RANGE | 1040 °C – 1070 °C |
| CASTING TEMPERATURE RANGE  | 1020 °C – 1050 °C |
| FLASK TEMPERATURE RANGE    | 600 °C – 700 °C   |

**Trees Without Stones:-** Let the flask cool for 15-18 minutes then quench in water.

**Trees With Stones:-** Let the flask cool for 40-45 minutes then quench in water.

## Investment Casting Instructions

Pre-Alloying is strongly recommended simply to ensure better homogeneity in castings as well as in hand made products. Also, for still better results, pre-alloying in an inert atmosphere is always preferred. The actual casting temperatures and flask temperatures shall be decided by the parameters like the section thickness of the items (thick, medium or thin), the overall size/bulk of the cast tree, the design intricacies etc. As a thumb rule, for thinner sections higher temperatures are selected and for thicker sections lower temperatures are preferred. At the same time, designs demanding higher form filling capabilities, higher than normal temperatures are an obvious choice.



## Cleaning, Pickling and Cooling Instructions

After primary removal of the investment during quenching, submerge tree in a hot (80-100 °C) 50% phosphoric acid solution for 15-20 minutes. Rinse well with cool water to remove remaining investment powder and base metal oxides.



## Reusing Scrap Instructions

Before reuse of scraps clean the scrap in best possible manner with the ultrasonic and magnetic polishing machine and remove all the dirt, oil, and greases from the metals. The scrap use percentage is not more than 50%.



### Notes:-

The above directions are only indicative. Strong variations to the above data are possible, depending on personal experience. Please, do not hesitate to contact us for further information.



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