

Color - Ultra White Purpose - Casting Karat - 9K - 18K

| Physical & Mechanical Properties |        |                   |       |       |       |  |                |             |                       |     |  |
|----------------------------------|--------|-------------------|-------|-------|-------|--|----------------|-------------|-----------------------|-----|--|
| Composition                      |        | Color Coordinates |       |       |       |  | Density (g/cc) |             | As cast Hardness (HV) |     |  |
| Cu                               | 57.50% | Karat             | L*    | a*    | b*    |  |                |             |                       |     |  |
| Ag                               | 6.50%  | 10K 974           | 87.08 | 0.525 | 9.77  |  | 10K 974        | 11.19       | 10K 974               | 200 |  |
| Zn                               | 17.00% | 14K 974           | 86.98 | 0.91  | 11.33 |  | 14K 974        | 12.72       | 14K 974               | 185 |  |
| Ni                               | 19.00% | 18K 974           | 87.2  | 1.71  | 14.06 |  | 18K 974        | 14.74       | 18K 974               | 206 |  |
|                                  |        |                   |       |       |       |  |                | · · · · · · |                       | -   |  |

## **Physical & Mechanical Properties**

## **Melting & Casting Instructions**

| Temperatures |               |                 |                 |  |  |  |  |  |  |  |
|--------------|---------------|-----------------|-----------------|--|--|--|--|--|--|--|
|              | Karat         | °C              | °F              |  |  |  |  |  |  |  |
| Pre alloying | 9К - 14К      | 1055° - 1065° C | 1931° - 1949° F |  |  |  |  |  |  |  |
|              | 10K           | 1020° - 1040° C | 1868° - 1904° F |  |  |  |  |  |  |  |
| Casting      | 14K           | 1015° - 1034° C | 1859° - 1895° F |  |  |  |  |  |  |  |
|              | 18K           | 980° - 1000° C  | 1796° - 1832° F |  |  |  |  |  |  |  |
| Flask        | 9K - 18K      | 540° - 675° C   | 1004° - 1247° F |  |  |  |  |  |  |  |
| Quench Time  | 15-25 Minutes | Remelting       | 70% Fresh Mix   |  |  |  |  |  |  |  |

## **General Instructions**

• Very little *boric acid* flux is recommended. Do not use carbon flux such as soda ash, saltpeter etc. No flux needed in bottom pour automatic casting unit.

• *Flouric based* investment removers are the best for silicon oxide invisible coating. Use of aggresive acid causes corrosion and surface damage. *United's brite cast* investment removers works effectively.

• To calculate the weight of the metal needed (in grams), *multiply density (gm/cc) with weight of wax* (grams). Add 10% of the total weight for button.

• <u>Gypsum bonded</u> investment is recommended. Follow manufacurer's instruction for burnout cycle.

Note: There are proprietary metals in the formulation which are not included in the composition section.

**Technical Assistance:** Always available... Call 1-800-999-3463 / 1-800-999-FINE E-mail / techteam@unitedpmr.com Web-Site / www.unitedpmr.com