

## TECHNICAL DATA SHEET

### SPARK692H + Ag40% - 917 ‰

Master alloy for the production of yellow 750 - 917 ‰ gold jewellery obtained by investment casting. The elements contained in this product ensure a high deoxidation in casting and a high surface quality, making it suitable for castings with and without stones in place. The use is suggested with the addition of 40 - 60 % of pure silver to the master alloy.

TAB.1 - Mechanical data

|                   |      |    |
|-------------------|------|----|
| Hardness as cast  | 82   | HV |
| Hardness hardened | n.d. |    |
| Tensile strength  | n.d. |    |
| Yield strength    | n.d. |    |
| Elongation        | n.d. |    |

TAB.2 - Physical data

|                    |             |                   |    |
|--------------------|-------------|-------------------|----|
| Color              | Deep yellow |                   |    |
| Colour Coordinates | L*:         | 85.24             |    |
|                    | a*:         | 6.51              |    |
|                    | b*:         | 23.33             |    |
| Density            | 17.84       | g/cm <sup>3</sup> |    |
| Melting Range      | Solidus:    | 944               | °C |
|                    | Liquidus:   | 970               | °C |

TAB.3 - Heat treatments

|                             |           |           |
|-----------------------------|-----------|-----------|
| Solution annealing          | 675<br>20 | °C<br>min |
| Recrystallization Annealing | 675<br>20 | °C<br>min |
| Hardening                   | n.d.      |           |

TAB.4 - Investment casting parameters

|  |                          |                |                         |
|--|--------------------------|----------------|-------------------------|
| Premelting temperature                 |                          | 1070           | °C                      |
| Casting Temperature                    | Min:<br>Max:             | 1020<br>1120   | °C<br>°C                |
| Water investment powder ratio          |                          | 36-38          | %                       |
| Flask temperature                      | Min:<br>Max:             | 450<br>700     | °C<br>°C                |
| Quenching time without stones in place | Min:<br>Max:             | 5<br>20        | min<br>min              |
| Quenching time with stones in place    |                          | 15             | min<br>in boiling water |
| Pickling                               | H2SO4:<br>Temp:<br>Time: | 20<br>50<br>50 | %<br>°C<br>min          |