

TECHNICAL DATA SHEET

SPARK489 - 930 ‰

Master alloy for the production of 930 ‰ sterling silver 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.

TAB.1 - Mechanical data

| | | |
|-------------------|-----|-----|
| Hardness as cast | 68 | HV |
| Hardness hardened | 135 | HV |
| Tensile strength | 229 | MPa |
| Yield strength | 90 | MPa |
| Elongation | 54 | % |

TAB.2 - Physical data

| | | | |
|--------------------|-----------|-------------------|----|
| Color | Silver | | |
| Colour Coordinates | L*: | 95.32 | |
| | a*: | -0.6 | |
| | b*: | 6.05 | |
| Density | 10.32 | g/cm ³ | |
| Melting Range | Solidus: | 775 | °C |
| | Liquidus: | 896 | °C |

TAB.3 - Heat treatments

| | | |
|-----------------------------|-----------|-----------|
| Solution annealing | 650 30 | °C min |
| Recrystallization Annealing | 650 30 | °C min |
| Hardening | 300 | °C |
| | 180 | min |

TAB.4 - Investment casting parameters

| | | | |
|--|--------------------------|----------------|-------------------------|
| Premelting temperature | | 995 | °C |
| Casting Temperature | Min: Max: | 945 1045 | °C °C |
| Water investment powder ratio | | 36-38 | % |
| Flask temperature | Min: Max: | 450 700 | °C °C |
| Quenching time without stones in place | Min: Max: | 5 10 | min min |
| Quenching time with stones in place | | 15 | min in boiling water |
| Pickling | H2SO4: Temp: Time: | 20 50 50 | % °C min |