

GENERAL INFORMATION
General information

| | |
|--------------------|-----------------------|
| Production process | Universal |
| Color | Red |
| Color shade | Red |
| Typology | Master alloy for gold |

Melting temperatures

| | |
|--------------------|-------|
| Liquidus [°C] | 940.0 |
| Solidus [°C] | 920.0 |
| Melting range [°C] | 20.0 |

Commercial composition

| | |
|------------|-------|
| Silver (%) | 5,00 |
| Copper (%) | 92,00 |
| Zinc (%) | 3,00 |



GOLD line

FULL CHARACTERIZATION DATA
Color coordinates

| | |
|----|------|
| L* | 86.6 |
| a* | 9.7 |
| b* | 14.7 |
| c* | 17.6 |

Physical characteristics

| | |
|------------------------------|------|
| Density [g/cm ³] | 12.9 |
|------------------------------|------|

General characteristics

| | |
|-------------------------|------|
| As cast grain size [μm] | 30.0 |
|-------------------------|------|

Product applications

| |
|---------------------------|
| Wire production |
| Stamping production |
| Casting in closed systems |
| Continuous casting |
| Massive chain production |
| Casting without stones |
| TIG tube production |
| Sheet production |

Mechanical characteristics

| | |
|---|-------|
| As cast hardness [HV 0.2] | 130.0 |
| Hardness after annealing [HV 0.2] | 145.0 |
| Hardness after 70% area red. [HV 0.2] | 270.0 |
| Single step age-hardening hardness [HV 0.2] | 150.0 |
| Tensile strength (Rm) [Mpa] | 491.0 |
| Yield strength (Rp0.2) [MPa] | 258.0 |
| Elongation at rupture (A) [%] | 33.0 |

RELATED PRODUCTS LIST
Related Products

| | |
|--------|--|
| GFRED | Red gold flash solution for bath plating 0.8 g/l (ready-to-use) |
| LSR490 | Master alloy for soldering of 375-585-750‰ (9-14-18 Kt) red gold |

CASTING PROCESSING PARAMETERS

Pre-mixing temperature [°C] 1060.0

| CASTING TEMPERATURES | Flask from [°C] | Flask to [°C] | Metal from [°C] | Metal to [°C] |
|----------------------|-----------------|---------------|-----------------|---------------|
| < 0.5 mm | 660.0 | 720.0 | 1040.0 | 1070.0 |
| 0.5 - 1.2 mm | 580.0 | 650.0 | 1020.0 | 1040.0 |
| > 1.2 mm | 460.0 | 600.0 | 1000.0 | 1020.0 |

Trees without stones

Remove the flask within 1 minute after pouring, then quench immediately in water.

Stone-in-place casting trees

Remove the flask immediately from the machine. Dip only the bottom part of the tree in cold water and keep under ventilation for 15 minutes. Quench in warm water.

Pickling

Dip in RADIAL solution (50 g/l conc. at 60°C for 2 min.), or in sulphuric acid (10% conc. at 50°C for 5 min.)

MECHANICAL WORKING PARAMETERS

Pre-mixing temperature [°C] 1060.0

Reductions

| | |
|-------------------------------|------|
| Sheet - area or thickness (%) | 70.0 |
| Wire - diameter (%) | 45.0 |

| POURING TEMPERATURES | Countinous from [°C] | Countinous to [°C] | Ingot from [°C] | Ingot to [°C] |
|----------------------|----------------------|--------------------|-----------------|---------------|
| Temperatures | 1040.0 | 1120.0 | 1020.0 | 1060.0 |

| MECHANICAL WORKING ANNEALING | Temp. from [°C] | Temp. to [°C] | Time [min] |
|------------------------------|-----------------|---------------|------------|
| <1 mm | 620.0 | 660.0 | 25.0 |
| 1 - 5 mm | 620.0 | 660.0 | 30.0 |
| >5 mm | 620.0 | 660.0 | 35.0 |

Mechanical working quenching

Quench directly in a 50% water/50% alcohol solution or in water

AGE HARDENING PROCESSING PARAMETERS

| SINGLE STEP AGE-HARDENING TREATMENT | Temperature [°C] | Time [min] | Quenching |
|-------------------------------------|------------------|------------|-------------------|
| Age-hardening | 300.0 | 90.0 | Air or in furnace |