

GENERAL INFORMATION
General information

| | |
|------------------------|-----------------------|
| Typology | Master alloy for gold |
| Color | White |
| Color shade | Standard white |
| Production process | Casting |
| Grain refinement level | Low |
| Deoxidation level | Medium |

Commercial composition (%)

| | |
|----|------|
| CU | 58.0 |
| NI | 19.0 |
| ZN | 16.0 |
| AG | 7.0 |

Melting Temperatures

| | |
|--------------------|-------|
| Solidus [°C] | 880.0 |
| Liquidus [°C] | 935.0 |
| Melting range [°C] | 55.0 |

FULL CHARACTERIZATION DATA
Color coordinates

| L * | a* | b* | c* | Yellow Index |
|------|-----|-----|------|--------------|
| 80.0 | 1.3 | 9.9 | 10.0 | 22.1 |

Mechanical characteristics

| | |
|---------------------------------------------|-------|
| As cast hardness [HV 0.2] | 165.0 |
| Hardness after 70% area red. [HV 0.2] | 300.0 |
| Hardness after annealing [HV 0.2] | 180.0 |
| Single step age-hardening hardness [HV 0.2] | 225.0 |
| Tensile strength (Rm) [Mpa] | 577.0 |
| Yield strength (Rp0.2) [MPa] | 360.0 |
| Elongation at rupture (A) [%] | 37.0 |

Physical characteristics

| | |
|-----------------|------|
| Density [g/cm³] | 12.8 |
|-----------------|------|

General characteristics

| | |
|-------------------------|-------|
| As cast grain size [µm] | 520.0 |
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Product applications

Stone-in-place casting
Casting in closed systems
Casting without stones

CASTING PROCESSING PARAMETERS
Pre-melting temperature

Temperature [°C] 1055

POURING TEMPERATURES

| | Flask from [°C] | Flask to [°C] | Metal from [°C] | Metal to [°C] |
|--------------|-----------------|---------------|-----------------|---------------|
| < 0.5 mm | 660 | 720 | 1060 | 1090 |
| 0.5 - 1.2 mm | 580 | 650 | 1040 | 1060 |
| > 1.2 mm | 460 | 600 | 1020 | 1040 |

Trees without stones

Let the flask cool down for 10-15 minutes, then quench it in water.

Stone-in-place casting trees

Let the flask cool down for 45-60 minutes, then quench it in water.

Pickling

Dip in RADIAL solution (50 g/l concentration at 60°C) for 5-10 minutes, or in sulphuric acid (10% concentration at 50°C) for 10 minutes.

AGE HARDENING PROCESSING PARAMETERS

| SINGLE STEP | Temperature [°C] | Time [min] | Quenching |
|---------------|------------------|------------|----------------------|
| AGE HARDENING | 200.0 | 90.0 | In air or in furnace |