

GENERAL INFORMATION

General information

| | |
|------------------------|-------------------------|
| Typology | Master alloy for silver |
| Color | Silver |
| Production process | Casting |
| Grain refinement level | High |
| Deoxidation level | Very high |

Commercial composition (%)

| | |
|----|-------|
| CU | 70.00 |
| ZN | 30.00 |

Melting Temperatures

| | |
|--------------------|-------|
| Solidus [°C] | 710.0 |
| Liquidus [°C] | 880.0 |
| Melting range [°C] | 170.0 |

FULL CHARACTERIZATION DATA

Color coordinates

| L * | a* | b* | c* | Yellow Index |
|------|------|-----|-----|--------------|
| 93.6 | -0.5 | 4.0 | 4.0 | 8.3 |

Mechanical characteristics

| | |
|---|-------|
| As cast hardness [HV 0.2] | 60.0 |
| Hardness after 70% area red. [HV 0.2] | 150.0 |
| Hardness after annealing [HV 0.2] | 65.0 |
| Double step age-hardening hardness [HV 0.2] | 115.0 |
| Single step age-hardening hardness [HV 0.2] | 85.0 |
| Tensile strength (Rm) [Mpa] | 229.0 |
| Yield strength (Rp0.2) [MPa] | 75.0 |
| Elongation at rupture (A) [%] | 34.0 |

Physical characteristics

| | |
|-------------------------|-------|
| As cast grain size [µm] | 600.0 |
| Density [g/cm³] | 10.3 |

Product applications

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

CASTING PROCESSING PARAMETERS

Pre-melting temperature

Temperature [°C] 1000

POURING TEMPERATURES

| | Flask from [°C] | Flask to [°C] | Metal from [°C] | Metal to [°C] |
|--------------|-----------------|---------------|-----------------|---------------|
| < 0.5 mm | 640 | 680 | 1010 | 1030 |
| 0.5 - 1.2 mm | 560 | 640 | 990 | 1010 |
| > 1.2 mm | 500 | 540 | 970 | 990 |

Trees without stones

Let the flask cool down in the chamber for 1 minute after pouring. Take the flask out of the machine without shaking it, let it cool for 15 minutes in air, then quench in water.

Stone-in-place casting trees

Let the flask cool down for 30-45 minutes, then quench it in water.

Pickling

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

AGE HARDENING PROCESSING PARAMETERS

| SINGLE STEP | Temperature [°C] | Time [min] | Quenching |
|---------------|------------------|------------|----------------------|
| AGE HARDENING | 300.0 | 90.0 | In air or in furnace |

| DOUBLE STEP | Temperature [°C] | Time [min] | Quenching |
|----------------|------------------|------------|----------------------|
| Age-hardening | 300.0 | 60.0 | In air or in furnace |
| Homogenization | 680.0 | 40.0 | In water, immediate |