

GENERAL INFORMATION
General information

Color	White nickel-free
Production process	Universal
Color shade	Premium white
Typology	Master alloy for gold

Melting temperatures

Liquidus [°C]	920.0
Solidus [°C]	850.0
Melting range [°C]	70.0

Commercial composition

Silver (%)	82,00
Copper (%)	10,00
Zinc (%)	8,00



Proderma

FULL CHARACTERIZATION DATA
Color coordinates

L*	95.0
a*	-2.0
b*	10.4
c*	10.5
Yellow index	17.4

Physical characteristics

Density [g/cm ³]	12.0
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General characteristics

As cast grain size [μm]	50.0
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Product applications

Hollow chain production
Casting in closed systems
Stone-in-place casting
Casting without stones
Wire production
Ingot casting
Continuous casting
Massive chain production
Stamping production
Sheet production
Hand production
Age-hardening

Mechanical characteristics

As cast hardness [HV 0.2]	135.0
Hardness after annealing [HV 0.2]	135.0
Hardness after 70% area red. [HV 0.2]	210.0
Single step age-hardening hardness [HV 0.2]	190.0
Tensile strength (Rm) [Mpa]	420.0
Yield strength (Rp0.2) [MPa]	232.0
Elongation at rupture (A) [%]	28.0

RELATED PRODUCTS LIST
Related Products

FE5	Iron wire, 5.0 mm diameter, annealed
L1A	Powder for soldering of gold and silver chains
LSB442	Nickel-free master alloy for soldering of 375‰ (9 Kt) white gold

Alternative Products

WA12B1	Ni-Pd free all-purpose master alloy for 375‰ (9 Kt) white gold
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CASTING PROCESSING PARAMETERS

Pre-mixing temperature [°C] 1040.0

CASTING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	630.0	680.0	1020.0	1050.0
0.5 - 1.2 mm	580.0	630.0	1000.0	1020.0
> 1.2 mm	530.0	580.0	980.0	1000.0

Trees without stones

Let the flask cool down for 20 minutes, then quench in water.

Stone-in-place casting trees

Let the flask cool down for 30-45 minutes, then quench in 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] 1040.0

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	1020.0	1100.0	1000.0	1040.0

MECHANICAL WORKING ANNEALING	Temp. from [°C]	Temp. to [°C]	Time [min]
<1 mm	660.0	700.0	30.0
1 - 5 mm	660.0	700.0	35.0
>5 mm	660.0	700.0	40.0

Mechanical working quenching

Quench directly 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