

GENERAL INFORMATION
General information

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

Melting temperatures

Liquidus [°C]	910.0
Solidus [°C]	840.0
Melting range [°C]	70.0

Commercial composition

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



Proderma

FULL CHARACTERIZATION DATA
Color coordinates

L*	94.6
a*	-2.9
b*	16.0
c*	16.3
Yellow index	26.3

Physical characteristics

Density [g/cm ³]	12.7
------------------------------	------

General characteristics

As cast grain size [μm]	25.0
-------------------------	------

Product applications

Casting in closed systems
Casting without stones
Continuous casting
Wire production
Massive chain production
Sheet production
Stamping production
Hand production
Ingot casting

Mechanical characteristics

As cast hardness [HV 0.2]	100.0
Hardness after annealing [HV 0.2]	110.0
Hardness after 70% area red. [HV 0.2]	195.0
Single step age-hardening hardness [HV 0.2]	125.0
Tensile strength (Rm) [Mpa]	434.0
Yield strength (Rp0.2) [MPa]	266.0
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
--------	----------------------------------------------------------------

CASTING PROCESSING PARAMETERS

Pre-mixing temperature [°C] 1030.0

CASTING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	630.0	680.0	1010.0	1040.0
0.5 - 1.2 mm	580.0	630.0	990.0	1010.0
> 1.2 mm	530.0	580.0	970.0	990.0

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] 1030.0

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	1010.0	1090.0	990.0	1030.0

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
	300.0	90.0	Air or in furnace