

GENERAL INFORMATION
General information

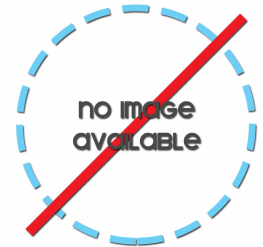
Color	White nickel-free
Production process	Universal
Color shade	Premium white
Typology	Master alloy for gold

Melting temperatures

Melting range [°C]	60.0
Liquidus [°C]	1080.0
Solidus [°C]	1020.0

Commercial composition

Copper (%)	45,00
Palladium (%)	53,00
Zinc (%)	2,00



Proderma

FULL CHARACTERIZATION DATA
Color coordinates

L*	79.6
a*	2.4
b*	7.0
c*	7.3
Yellow index	17.1

General characteristics

As cast grain size [µm]	250
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Mechanical characteristics

As cast hardness [HV 0.2]	160.0
Hardness after annealing [HV 0.2]	180.0
Hardness after 70% area red. [HV 0.2]	285.0
Single step age-hardening hardness [HV 0.2]	210.0
Tensile strength (Rm) [Mpa]	520.0
Yield strength (Rp0.2) [MPa]	332.0
Elongation at rupture (A) [%]	28.0

Product applications

Age-hardening
Casting in closed systems
Casting without stones
CNC and lathe production
Continuous casting
Ingot casting
Sheet production
Stamping production

CASTING PROCESSING PARAMETERS

Pre-mixing temperature [°C] 1220.0

CASTING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	700.0	730.0	1190.0	1220.0
0.5 - 1.2 mm	660.0	700.0	1170.0	1190.0
> 1.2 mm	600.0	660.0	1150.0	1170.0

Trees without stones

Let the flask cool down for 10-15 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 5-10 min.), or in sulphuric acid (10% conc. at 50°C for 10 min.)

MECHANICAL WORKING PARAMETERS

Pre-mixing temperature [°C] 1220.0

Reductions

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

POURING TEMPERATURES	Countinous from [°C]	Countinous to [°C]	Ingot from [°C]	Ingot to [°C]
Temperatures	1180.0	1260.0	1160.0	1200.0

MECHANICAL WORKING ANNEALING	Temp. from [°C]	Temp. to [°C]	Time [min]
<1 mm	730.0	770.0	30.0
1 - 5 mm	730.0	770.0	35.0
>5 mm	730.0	770.0	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	450.0	90.0	Air or in furnace