

**MASTER
ALLOY**
NF508 585‰

NICKEL-FREE ALL-PURPOSE MASTER ALLOY FOR 585-750‰ (14-18 KT) WHITE GOLD

GENERAL INFORMATION
General information

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

Melting temperatures

Melting range [°C]	80.0
Liquidus [°C]	1170.0
Solidus [°C]	1090.0

Commercial composition

Silver (%)	62,00
Copper (%)	3,00
Palladium (%)	31,00
Zinc (%)	4,00



Proderma

FULL CHARACTERIZATION DATA
Color coordinates

L*	83.6
a*	1.5
b*	9.0
c*	9.1
Yellow index	19.7

Physical characteristics

Density [g/cm ³]	14.4
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General characteristics

As cast grain size [μm]	25.0
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Product applications

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

Mechanical characteristics

As cast hardness [HV 0.2]	105.0
Hardness after annealing [HV 0.2]	130.0
Hardness after 70% area red. [HV 0.2]	195.0
Tensile strength (Rm) [Mpa]	432.0
Yield strength (Rp0.2) [MPa]	284.0
Elongation at rupture (A) [%]	21.0

RELATED PRODUCTS LIST
Related Products

LSG406B	Master alloy for soldering of 750‰ (18 Kt) yellow gold
LSG409D	Master alloy for soldering of 585‰ (14 Kt) yellow gold
LSG409V	Master alloy for soldering of 750‰ (18 Kt) yellow gold

Alternative Products

NF509	Nickel-free all-purpose master alloy for 750‰ (18 Kt) white gold
OB315A	Nickel-free all-purpose master alloy for 585-750‰ (14-18 Kt) white gold

CASTING PROCESSING PARAMETERS

Pre-mixing temperature [°C] 1250.0

CASTING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660.0	730.0	1260.0	1290.0
0.5 - 1.2 mm	640.0	660.0	1240.0	1260.0
> 1.2 mm	600.0	640.0	1220.0	1240.0

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] 1250.0

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	1270.0	1350.0	1250.0	1290.0

MECHANICAL WORKING ANNEALING	Temp. from [°C]	Temp. to [°C]	Time [min]
<1 mm	680.0	740.0	30.0
1 - 5 mm	680.0	740.0	35.0
>5 mm	680.0	740.0	40.0

Mechanical working quenching

Quench directly in a 50% water/50% alcohol solution or in water