

**GENERAL INFORMATION**
**General information**

Typology	Master alloy for gold
Color	White, nickel-free
Color shade	Standard white
Production process	All-purpose
Grain refinement level	High
Deoxidation level	Minimum

**Commercial composition (%)**

AG	62.0
PD	30.8
ZN	4.0
CU	3.2

**Melting Temperatures**

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

**FULL CHARACTERIZATION DATA**
**Color coordinates**

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

**Mechanical characteristics**

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

**Physical characteristics**

Density [g/cm <sup>3</sup> ]	14.4
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**General characteristics**

As cast grain size [μm]	25.0
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**Product applications**

Continuous casting  
 Ingot casting  
 Casting in closed systems  
 Casting without stones  
 Handmade production  
 Massive chain production  
 Wire production  
 Sheet production  
 Stamping production  
 Soldering in belt furnace

**NF508 585‰**

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

**CASTING PROCESSING PARAMETERS**
**Pre-melting temperature**

Temperature [°C] 1250

**POURING TEMPERATURES**

	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660	730	1260	1290
> 1.2 mm	600	640	1220	1240
0.5 - 1.2 mm	640	660	1240	1260

**Trees without stones**

Let the flask cool down for 10-15 minutes, then quench it 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 concentration at 60°C) for 5-10 minutes, or in sulphuric acid (10% concentration at 50°C) for 10 minutes.

**MECHANICAL WORKING PARAMETERS**
**Pre-melting temperature**

Temperature [°C] 1250

**Reductions**

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

POURING TEMPERATURES	Countinous from [°C]	Countinous to [°C]	Ingot to [°C]	Ingot from [°C]
Temperatures	1270	1350	1250	1290

MECHANICAL WORKING ANNEALING	Temp. from [°C]	Temp. to [°C]	Time [min]
< 1 mm	680	740	30
1 - 5 mm	680	740	35
> 5 mm	680	740	40

**Mechanical working quenching**

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