

TECHNICAL DATASHEET AND GUIDELINE

WH80B2
Title 18 Kt

Master alloy for casting of 750‰ (18 Kt) white gold

GENERAL INFORMATION

Typology	Master alloy for gold
Production process	Casting
Color	White
Color shade	Standard white
Density [g/cm ³]	14.6
Melting temperatures	
Solidus [°C]	895
Liquidus [°C]	935

Commercial composition	
Cu (%)	56
Ni (%)	28
Zn (%)	16



FULL CHARACTERIZATION DATA

General characteristics	
As cast grain size [µm]	90
Color coordinates	
L*	81.5
a*	1.6
b*	11
c*	11.1
Yellow index	24.06

Mechanical characteristics	
Tensile strength (Rm) [MPa]	588
Yield strength (Rp0.2) [MPa]	433
Elongation at rupture (A) [%]	32
As cast hardness [HV 0.2]	198
Hardness after 70% area red. [HV 0.2]	314
Hardness after annealing [HV 0.2]	214
Single step age-hardening hardness [HV 0.2]	241

PRODUCT APPLICATIONS

Casting in closed systems
Casting without stones
Age-hardening

RELATED PRODUCTS

NI1811-01	Low nickel release, all-purpose
NI1811-03	Low nickel release, deoxidized version
WH80D	Higher deoxidizers level
LSB475A	Medium/soft solder for 750‰ white gold
LSG409V	Medium solder for 750‰ yellow gold

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CASTING PROCESSING PARAMETERS

Casting temperatures	Metal - from [°C]	Metal - to [°C]	Flask - from [°C]	Flask - to [°C]
Thin (below 0.5 mm)	1035	1065	660	720
Medium (from 0.5 to 1.2 mm)	1015	1035	580	650
Thick (above 1.2 mm)	995	1015	460	600

Stone-in-place casting trees

Let the flask cool down for 45-60 minutes, then quench in water.

Trees without stones

Let the flask cool down for 10-15 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.)