

NI1811-09 750‰

LOW NICKEL RELEASE MASTER ALLOY FOR CASTING OF 750‰ (18 KT) WHITE GOLD

GENERAL INFORMATION
General information

Typology	Master alloy for gold
Color	White, low nickel release
Color shade	Standard white
Production process	Casting
Grain refinement level	Very high
Deoxidation level	Low

Commercial composition (%)

CU	69.0
NI	19.0
ZN	12.0

Melting Temperatures

Solidus [°C]	890.0
Liquidus [°C]	920.0

FULL CHARACTERIZATION DATA
Color coordinates

L *	a*	b*	c*	Yellow Index
88.0	2.4	11.5		24.0

Mechanical characteristics

As cast hardness [HV 0.2]	180.0
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Physical characteristics

Density [g/cm ³]	14.6
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General characteristics

As cast grain size [μm]	130.0
Ni release, maximum value μg/cm ²	0.3

Product applications

Stone-in-place casting
 Casting in closed systems
 Casting without stones
 Age hardening

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CASTING PROCESSING PARAMETERS
Pre-melting temperature

Temperature [°C] 1040

POURING TEMPERATURES

	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	650	700	1010	1050
0.5 - 1.2 mm	580	650	990	1010
> 1.2 mm	460	600	970	990

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 conc. at 60°C) for 2 minutes, or in sulphuric acid (10% concentration at 50°C) for 5 minutes.

AGE HARDENING PROCESSING PARAMETERS

SINGLE STEP	Temperature [°C]	Time [min]	Quenching
AGE HARDENING	275.0	90.0	In air or in furnace