

**MASTER  
ALLOY**
**ALPCAST**

ALPACA FOR CASTING

**GENERAL INFORMATION**
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Typology	Alpaca
Color	White
Color shade	Off-white
Production process	Casting
Grain refinement level	Low
Deoxidation level	Medium

**Commercial composition (%)**

CU	55.0
ZN	36.0
NI	9.0

**MELTING TEMPERATURES**

Solidus [°C]	900.0
Liquidus [°C]	935.0
Melting range [°C]	35.0

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

L *	a*	b*	c*	Yellow Index
82.0	-0.4	13.0	13.0	25.8

**Mechanical characteristics**

As cast hardness [HV 0.2]	115.0
Hardness after 70% area red. [HV 0.2]	250.0
Hardness after annealing [HV 0.2]	150.0
Single step age-hardening hardness [HV 0.2]	120.0
Tensile strength (Rm) [Mpa]	488.0
Yield strength (Rp0.2) [MPa]	385.0
Elongation at rupture (A) [%]	22.0

**Physical characteristics**

Density [g/cm³]	8.4
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**Product applications**

Stone-in-place casting  
 Casting in closed systems  
 Casting in open systems  
 Casting without stones

**CASTING PROCESSING PARAMETERS**

POURING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660	720	1035	1065
> 1.2 mm	460	600	995	1015
0.5 - 1.2 mm	580	650	1015	1035

**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.