

TECHNICAL DATASHEET AND GUIDELINE

C142GR
Title 375 ‰

Master alloy for casting of 375-585‰ (9-14 Kt) yellow gold

GENERAL INFORMATION

Typology	Master alloy for gold
Production process	Casting
Color	Yellow
Color shade	Light yellow
Density [g/cm ³]	11
Melting temperatures	
Solidus [°C]	825
Liquidus [°C]	930

Commercial composition	
Ag (%)	12.5
Cu (%)	70.5
Zn (%)	17



FULL CHARACTERIZATION DATA

General characteristics	
As cast grain size [µm]	800
Fluidity (grid filling test) [%]	50
Color coordinates	
L*	87.2
a*	1.6
b*	17.8
c*	17.9

Mechanical characteristics	
Tensile strength (Rm) [MPa]	481
Yield strength (Rp0.2) [MPa]	244
Elongation at rupture (A) [%]	30
As cast hardness [HV 0.2]	101
Hardness after 70% area red. [HV 0.2]	203
Hardness after annealing [HV 0.2]	124
Single step age-hardening hardness [HV 0.2]	120

PRODUCT APPLICATIONS

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

RELATED PRODUCTS

B145	Mechanical working, low silver content
OG130A	Higher deoxidizers level
LSG409	Medium/soft solder for 585‰ yellow gold
LSG409D	Medium solder for 585‰ yellow gold
LSG417F	Medium solder for 375‰ yellow gold
LSG419	Extra soft solder for 375‰ 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)	1030	1060	660	720
Medium (from 0.5 to 1.2 mm)	1010	1030	580	650
Thick (above 1.2 mm)	990	1010	460	600

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