

TECHNICAL DATASHEET AND GUIDELINE

**C142GR**  
Title 585 ‰

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	Rich yellow
Density [g/cm <sup>3</sup> ]	12.8
<b>Melting temperatures</b>	
Solidus [°C]	821
Liquidus [°C]	875

<b>Commercial composition</b>	
Ag (%)	12.5
Cu (%)	70.5
Zn (%)	17



## FULL CHARACTERIZATION DATA

<b>General characteristics</b>	
As cast grain size [µm]	330
<b>Color coordinates</b>	
L*	85.7
a*	2.7
b*	18
c*	18.2

<b>Mechanical characteristics</b>	
Tensile strength (Rm) [MPa]	447
Yield strength (Rp0.2) [MPa]	242
Elongation at rupture (A) [%]	33
As cast hardness [HV 0.2]	118
Hardness after 70% area red. [HV 0.2]	250
Hardness after annealing [HV 0.2]	135

## 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)	975	1005	660	720
Medium (from 0.5 to 1.2 mm)	955	975	580	650
Thick (above 1.2 mm)	935	955	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.)