

## WG142C Master alloy for casting of 585-750‰ (14-

### Technical datasheet and guideline for 14 Kt

#### GENERAL INFORMATION AND RECOMMENDED APPLICATIONS

Typology	<b>Master alloy for gold</b>
Production process	<b>Casting</b>
Color	<b>White</b>

Color	<b>Premium white</b>
Density [g/cm <sup>3</sup> ]	<b>12.7</b>
Melting temperatures	<b>Solidus [°C] 870</b> <b>Liquidus [°C] 935</b>
As cast hardness [HV 0.2]	<b>172</b>

#### Product applications

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

#### FULL CHARACTERIZATION DATA

<b>General characteristics</b>	
As cast grain size [µm]	320
Fluidity (grid filling test) [%]	99
<b>Color coordinates</b>	
L*	84.7
a*	0.3
b*	8.7
c*	8.7
Color shade	Premium white

<b>Mechanical characteristics</b>	
Tensile strength (Rm) [MPa]	647
Yield strength (Rp0.2) [MPa]	410
Elongation at rupture (A) [%]	32
As cast hardness [HV 0.2]	172
Hardness after 70% area red. [HV 0.2]	318
Hardness after annealing [HV 0.2]	205

#### CASTING PROCESSING PARAMETERS

<b>Pre-mixing temperature [°C]</b>	<b>1055</b>
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<b>Casting temperatures</b>	<b>Metal - from [°C]</b>	<b>Metal - to [°C]</b>	<b>Flask - from [°C]</b>	<b>Flask - to [°C]</b>
Thin (below 0.5 mm)	<b>1030</b>	<b>1050</b>	<b>660</b>	<b>720</b>
Medium (from 0.5 to 1.2 mm)	<b>1010</b>	<b>1030</b>	<b>580</b>	<b>650</b>
Thick (above 1.2 mm)	<b>990</b>	<b>1010</b>	<b>460</b>	<b>600</b>

### 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.)

## MECHANICAL WORKING PARAMETERS

Pre-mixing temperature [°C]      1055

<b>Casting temperature</b>	<b>Metal - from [°C]</b>	<b>Metal - to [°C]</b>
Ingot making		
Continuous casting		



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