

TECHNICAL DATASHEET AND GUIDELINE

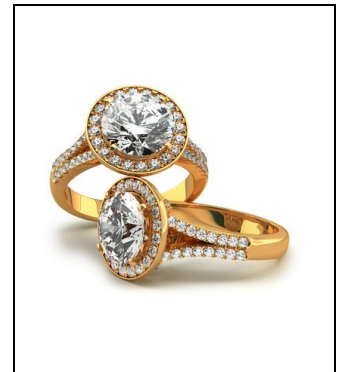
**C182N**  
Title 18 Kt

Master alloy for casting of 750‰ (18 Kt) yellow gold

## GENERAL INFORMATION

Typology	<b>Master alloy for gold</b>
Production process	<b>Casting</b>
Color	<b>Yellow</b>
Color shade	<b>Light yellow</b>
Density [g/cm <sup>3</sup> ]	<b>14.9</b>
<b>Melting temperatures</b>	
Solidus [°C]	<b>861</b>
Liquidus [°C]	<b>910</b>

<b>Commercial composition</b>	
Ag (%)	<b>58</b>
Cu (%)	<b>39</b>
Zn (%)	<b>3</b>



## FULL CHARACTERIZATION DATA

<b>General characteristics</b>	
As cast grain size [µm]	<b>300</b>
<b>Color coordinates</b>	
L*	<b>87.9</b>
a*	<b>2.6</b>
b*	<b>23.5</b>
c*	<b>23.7</b>

<b>Mechanical characteristics</b>	
Tensile strength (Rm) [MPa]	<b>352</b>
Yield strength (Rp0.2) [MPa]	<b>249</b>
Elongation at rupture (A) [%]	<b>44</b>
As cast hardness [HV 0.2]	<b>132</b>
Hardness after 70% area red. [HV 0.2]	<b>198</b>
Hardness after annealing [HV 0.2]	<b>141</b>
Single step age-hardening hardness [HV 0.2]	<b>196</b>

## PRODUCT APPLICATIONS

<b>Casting in open systems</b>
<b>Casting in closed systems</b>
<b>Stone-in-place casting</b>
<b>Casting without stones</b>
<b>Age-hardening</b>

## RELATED PRODUCTS

C182D	<b>Higher deoxidizers content</b>
C182N1	<b>Lower silver content</b>
LSG406B	<b>Soft solder for 750‰ yellow gold</b>
LSG409V	<b>Medium solder for 750‰ yellow gold</b>

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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)	<b>1010</b>	<b>1040</b>	<b>660</b>	<b>720</b>
Medium (from 0.5 to 1.2 mm)	<b>990</b>	<b>1010</b>	<b>580</b>	<b>650</b>
Thick (above 1.2 mm)	<b>970</b>	<b>990</b>	<b>460</b>	<b>600</b>

**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.)

**AGE HARDENING PROCESSING PARAMETERS**

Single step age-hardening treatment	Temperature [°C]	Time [min]	Quenching
Age-hardening	250	90	