

TECHNICAL DATASHEET AND GUIDELINE

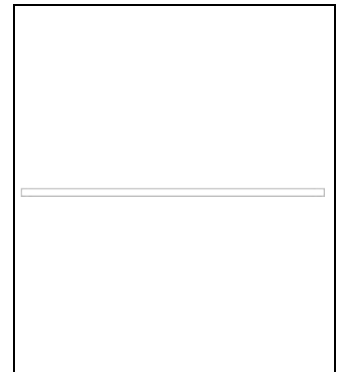
**B182N**  
Title 18 Kt

**Master alloy for mechanical working of 750‰ (18 Kt) yellow gold**

**GENERAL INFORMATION**

Typology	<b>Master alloy for gold</b>
Production process	<b>Mechanical working</b>
Color	<b>Yellow</b>
Color shade	<b>Light yellow</b>
Density [g/cm <sup>3</sup> ]	<b>15</b>
<b>Melting temperatures</b>	
Solidus [°C]	<b>860</b>
Liquidus [°C]	<b>910</b>

Commercial composition	
Ag (%)	<b>58</b>
Cu (%)	<b>38</b>
Zn (%)	<b>4</b>



**FULL CHARACTERIZATION DATA**

Color coordinates	
L*	<b>87.4</b>
a*	<b>3</b>
b*	<b>24.5</b>
c*	<b>24.7</b>

Mechanical characteristics	
Tensile strength (Rm) [MPa]	<b>402</b>
Yield strength (Rp0.2) [MPa]	<b>272</b>
Elongation at rupture (A) [%]	<b>41</b>
As cast hardness [HV 0.2]	<b>129</b>
Hardness after 70% area red. [HV 0.2]	<b>177</b>
Single step age-hardening hardness [HV 0.2]	<b>175</b>

**PRODUCT APPLICATIONS**

<b>Ingot casting</b>
<b>Continuous casting</b>
<b>Sheet production</b>
<b>Wire production</b>
<b>Production of tube from continuous casting</b>
<b>Massive chain production</b>
<b>Hollow chain production</b>
<b>Stamping production</b>
<b>Blanking production</b>
<b>TIG tube production</b>
<b>Cladding production</b>
<b>CNC and lathe production</b>

**RELATED PRODUCTS**

C182N	<b>Stone-in-place casting, 750‰ 2N yellow gold</b>
OG604Z	<b>Lower silver content, 750‰ light yellow gold</b>
L1A	<b>Soldering powder for chain</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)	990	1020	620	700
Medium (from 0.5 to 1.2 mm)	980	1000	560	650
Thick (above 1.2 mm)	970	980	500	620

**Trees without stones**

Let the flask cool down for 5 minutes, then quench in water.

### MECHANICAL WORKING PARAMETERS

Casting temperature	Metal - from [°C]	Metal - to [°C]	Recommended reductions	
Ingot making	990	1030	Sheet - area or thickness [%]	75
Continuous casting	1010	1090	Wire - diameter [%]	45

Mechanical working recommended annealing	Temperature - from [°C]	Temperature - to [°C]	Time [min]
> 5 mm	620	660	35
1 - 5 mm	620	660	30
< 1 mm	620	660	25

### AGE HARDENING PROCESSING PARAMETERS

Single step age-hardening treatment	Temperature [°C]	Time [min]	Quenching
Age-hardening	275	90	