

TECHNICAL DATASHEET AND GUIDELINE

**OG605B**  
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>Rich yellow</b>
Density [g/cm <sup>3</sup> ]	<b>15.2</b>
<b>Melting temperatures</b>	
Solidus [°C]	<b>880</b>
Liquidus [°C]	<b>895</b>

<b>Commercial composition</b>	
Ag (%)	<b>48</b>
Cu (%)	<b>50</b>
Zn (%)	<b>2</b>



**FULL CHARACTERIZATION DATA**

<b>General characteristics</b>	
As cast grain size [µm]	<b>200</b>
<b>Color coordinates</b>	
L*	<b>84.3</b>
a*	<b>4.4</b>
b*	<b>21.4</b>
c*	<b>21.8</b>

<b>Mechanical characteristics</b>	
Tensile strength (Rm) [MPa]	<b>455</b>
Yield strength (Rp0.2) [MPa]	<b>290</b>
Elongation at rupture (A) [%]	<b>39</b>
As cast hardness [HV 0.2]	<b>157</b>
Hardness after 70% area red. [HV 0.2]	<b>250</b>
Hardness after annealing [HV 0.2]	<b>160</b>
Single step age-hardening hardness [HV 0.2]	<b>237</b>

**PRODUCT APPLICATIONS**

<b>Ingot casting</b>
<b>Continuous casting</b>
<b>Sheet production</b>
<b>Wire production</b>
<b>Massive chain production</b>
<b>Stamping production</b>
<b>Blanking production</b>
<b>Hand production</b>

**RELATED PRODUCTS**

B183N	<b>Standard 3N color, 750‰ gold working</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>

TECHNICAL DATASHEET AND GUIDELINE

**OG605B**  
Title 18 Kt

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

## CASTING PROCESSING PARAMETERS

Casting temperatures	Metal - from [°C]	Metal - to [°C]	Flask - from [°C]	Flask - to [°C]
Thin (below 0.5 mm)	<b>1000</b>	<b>1030</b>	<b>670</b>	<b>720</b>
Medium (from 0.5 to 1.2 mm)	<b>980</b>	<b>1000</b>	<b>580</b>	<b>650</b>
Thick (above 1.2 mm)	<b>960</b>	<b>980</b>	<b>460</b>	<b>600</b>

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

## MECHANICAL WORKING PARAMETERS

Casting temperature	Metal - from [°C]	Metal - to [°C]	Recommended reductions	
Ingot making	<b>975</b>	<b>1015</b>	Sheet - area or thickness [%]	<b>70</b>
Continuous casting	<b>995</b>	<b>1075</b>	Wire - diameter [%]	<b>45</b>

Mechanical working recommended annealing	Temperature - from [°C]	Temperature - to [°C]	Time [min]
> 5 mm	<b>600</b>	<b>640</b>	<b>35</b>
1 - 5 mm	<b>600</b>	<b>640</b>	<b>30</b>
< 1 mm	<b>600</b>	<b>640</b>	<b>25</b>

## AGE HARDENING PROCESSING PARAMETERS

Single step age-hardening treatment	Temperature [°C]	Time [min]	Quenching
Age-hardening	<b>275</b>	<b>90</b>	Air or in furnace