

TECHNICAL DATASHEET AND GUIDELINE

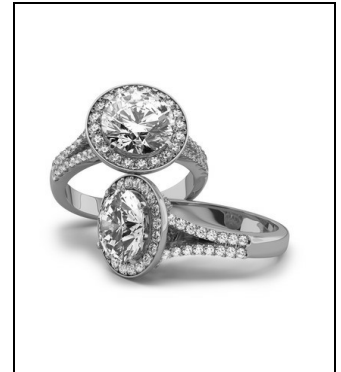
**WB140C**  
Title 9 Kt

Master alloy for casting of 375-585‰ (9-14 Kt) white gold

GENERAL INFORMATION

Typology	<b>Master alloy for gold</b>
Production process	<b>Casting</b>
Color	<b>White</b>
Color shade	<b>Premium white</b>
Density [g/cm <sup>3</sup> ]	<b>11.1</b>
Density [g/cm <sup>3</sup> ]	<b>12.9</b>
<b>Melting temperatures</b>	
Solidus [°C]	<b>865</b>
Liquidus [°C]	<b>925</b>

<b>Commercial composition</b>	
Ag (%)	<b>15</b>
Cu (%)	<b>49</b>
Ni (%)	<b>18</b>
Zn (%)	<b>18</b>



FULL CHARACTERIZATION DATA

<b>General characteristics</b>	
As cast grain size [µm]	<b>25</b>
Fluidity (grid filling test) [%]	<b>96</b>
<b>Color coordinates</b>	
L*	<b>87</b>
a*	<b>-0.1</b>
b*	<b>8.9</b>
c*	<b>8.9</b>
Yellow index	<b>17.89</b>

<b>Mechanical characteristics</b>	
Tensile strength (Rm) [MPa]	<b>658</b>
Yield strength (Rp0.2) [MPa]	<b>464</b>
Elongation at rupture (A) [%]	<b>25</b>
As cast hardness [HV 0.2]	<b>154</b>
Hardness after 70% area red. [HV 0.2]	<b>292</b>
Hardness after annealing [HV 0.2]	<b>187</b>
Single step age-hardening hardness [HV 0.2]	<b>207</b>

PRODUCT APPLICATIONS

<b>Casting in closed systems</b>
<b>Stone-in-place casting</b>
<b>Age-hardening</b>

RELATED PRODUCTS

WB142C	<b>Lower silver content, casting with stones in all titles</b>
WB143C	<b>Maximum fluidity, higher silver content</b>
LSB442	<b>Medium solder for 375‰ white gold</b>
LSB455	<b>Medium/soft solder for 585‰ white gold</b>

TECHNICAL DATASHEET AND GUIDELINE

**WB140C**  
Title 9 Kt

**Master alloy for casting of 375-585‰ (9-14 Kt) white gold**

**CASTING PROCESSING PARAMETERS**

Casting temperatures	Metal - from [°C]	Metal - to [°C]	Flask - from [°C]	Flask - to [°C]
Thin (below 0.5 mm)	<b>1025</b>	<b>1055</b>	<b>660</b>	<b>720</b>
Medium (from 0.5 to 1.2 mm)	<b>1005</b>	<b>1025</b>	<b>580</b>	<b>650</b>
Thick (above 1.2 mm)	<b>985</b>	<b>1005</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.)