

TECHNICAL DATASHEET AND GUIDELINE

**OTTWE**  
Title

**Nickel-free white bronze for casting**

**GENERAL INFORMATION**

Typology	<b>Bronze</b>
Production process	<b>Casting</b>
Color	<b>White</b>
Color shade	<b>Green yellow</b>
Density (g/cm <sup>3</sup> )	<b>8.3</b>
<b>Melting temperatures</b>	
Solidus (°C)	<b>815</b>
Liquidus (°C)	<b>930</b>

<b>Commercial composition</b>	
Cu (%)	<b>84</b>
Mn (%)	<b>16</b>



**FULL CHARACTERIZATION DATA**

Fluidity (grid filling test) [%]	<b>100</b>
<b>Color coordinates</b>	
L*	<b>84.2</b>
a*	<b>1.9</b>
b*	<b>6</b>
c*	<b>6.3</b>
Y*	<b>14</b>

<b>Mechanical characteristics</b>	
As cast hardness [HV 0.2]	<b>113</b>

**PRODUCT APPLICATIONS**

**Casting in closed systems**

**Casting without stones**

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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>1030</b>	<b>1060</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>

**Trees without stones**

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

**Pickling**

Dip in 50% sodium hydroxide or 50% potassium hydroxide, 100°C for 0.5-1h

**AGE HARDENING PROCESSING PARAMETERS**

Age-hardening using solubilization treatment	Temperature (°C)	Time (min)	Quenching
Age-hardening	<b>350</b>	<b>90</b>	