

**MASTER
ALLOY**
OTT85-15

BRASS AT 15% ZINC

GENERAL INFORMATION
General information

Typology	Brass
Color	Yellow
Color shade	Rich yellow
Production process	All-purpose
Grain refinement level	Minimum
Deoxidation level	Minimum

Commercial composition (%)

CU	85.0
ZN	15.0

Melting Temperatures

Solidus [°C]	1010.0
Liquidus [°C]	1040.0
Melting range [°C]	30.0

FULL CHARACTERIZATION DATA
Color coordinates

L *	a*	b*	c*	Yellow Index
88.4	5.2	22.1	22.6	

Mechanical characteristics

As cast hardness [HV 0.2]	65.0
Hardness after 70% area red. [HV 0.2]	205.0
Hardness after annealing [HV 0.2]	70.0
Tensile strength (Rm) [Mpa]	283.0
Yield strength (Rp0.2) [MPa]	83.0
Elongation at rupture (A) [%]	29.0

Physical characteristics

Density [g/cm ³]	8.6
------------------------------	-----

General characteristics

As cast grain size [μm]	740.0
-------------------------	-------

Product applications

Ingot casting
Wire production
Sheet production

CASTING PROCESSING PARAMETERS
Pre-melting temperature

Temperature [°C]

POURING TEMPERATURES

< 0.5 mm	660	720	1130	1160
0.5 - 1.2 mm	580	650	1110	1130
> 1.2 mm	460	600	1190	1110

Flask from [°C]
Flask to [°C]
Metal from [°C]
Metal to [°C]
Trees without stones

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

Stone-in-place casting trees

Let the flask cool down for 30-45 minutes, then quench it in water.

Pickling

Dip in RADIAL solution (50 g/l conc. at 60°C) for 2 minutes, or in sulphuric acid (10% concentration at 50°C) for 5 minutes.

MECHANICAL WORKING PARAMETERS
Pre-melting temperature

Temperature [°C]

Reductions

Wire - diameter (%)	45.0
Sheet - area or thickness (%)	70.0

POURING TEMPERATURES
Countinous from [°C]
Countinous to [°C]
Ingot to [°C]
Ingot from [°C]
Temperatures

1140

1220

1120

1060

MECHANICAL WORKING ANNEALING
Temp. from [°C]
Temp. to [°C]
Time [min]

< 1 mm

660

700

25

1 - 5 mm

660

700

30

> 5 mm

660

700

35

Mechanical working quenching

Quench directly in water.