Material Datasheet: CuZn39Pb1AlB-B (CB755S)

BRASS INGOTS

Reviewed in 10/2020

CB755S

Standard alloys for the sanitary industry

CB755S are the benchmark material for the sanitary industry. They are widely used for producing parts for the sanitary industry that are not in contact with drinking water.

MATERIAL DESIGNATION

ASBW	International	EN	UNS	JIS	Further Restrictions**
L02	CuZn39Pb1AlB-B	CB755S (CC755S)*	-	-	-

REFERENCE CHEMICAL COMPOSITION IN % (MAIN ELEMENTS) *

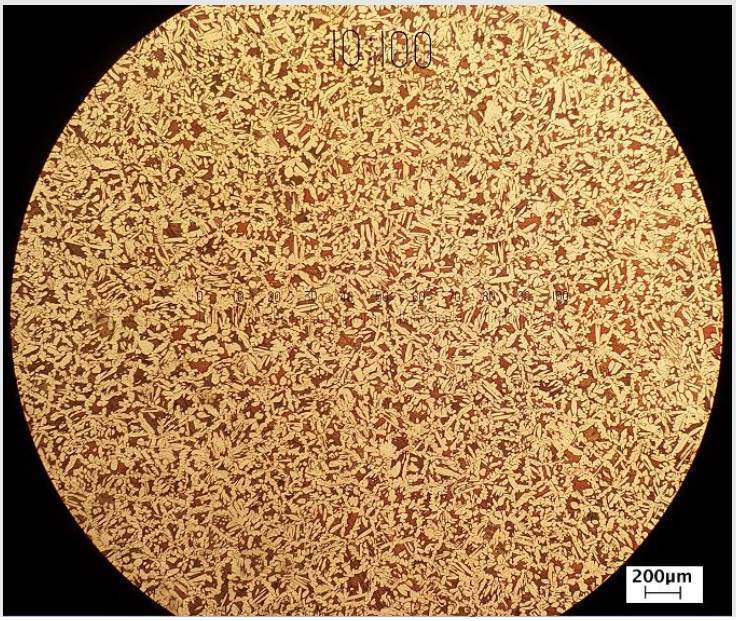
Material**	Cu	Pb	Ni	Fe	As	Sn	Al	Bi	Mn	Zn
L02	59,5	1,3	0,1	0,1	-	0,2	0,6	-	-	Remainder

*** Deviations from these values may occur within the restrictions of the relevant standard specifications.**
Elements not listed are complying with EN1982 and 4MS Common Approach if suitable.

**** The material symbol designation is based on the designation system given in ISO 1190-1. A "CB" is added to the designation to identify material in the form of ingots and a "CC" is added to the designation to identify material in the form of castings. These distinctions serve to avoid confusion with wrought products of a similar alloy.**

TYPICAL MICROSTRUCTURE

- **L02** (α-phase brighter + β-phase darker):



FABRICATION PROPERTIES

FORMING

Machinability (CuZn39Pb3 = 100 %)	80%
Castability	Excellent

JOINING

Resistance Welding (Butt Welding)	Fair
Inert Gas Shielded Arc Welding	Poor
Gas Welding (Most Commonly Oxyacetylene)	Not Recommended
Hard Soldering	Fair
Soft Soldering	Good
Brazing	Good

POLISHING

Mechanical	Good

WORK TEMPERATURE/HEAT TREATMENT

Smelting Range	920 – 1010 °C

PRODUCT STANDARDS

Ingot	EN 1982

CORROSION RESISTANCE

Machining brass is quite resistant to organic substances and to neutral or alkaline compounds.
In comparison, homogeneous α-brass has a much more satisfactory corrosion resistance due to its microstructure. As for the stress corrosion cracking and dezincification, specially under conditions as warm, acidic waters and ammoniacal atmospheres, they should be taken into consideration, even more when the material is not under a stress relieved condition.

Physical properties*

Material Density [g/cm³]	Electrical Conductivity		Thermal Conductivity [W/(m.K)]	Thermal Expansion Coefficient (0 – 300 °C) [10⁻⁶/K]	Modulus of Elasticity [GPa]
	[MS/m]	[% IACS]			
8,40	14,50	24	112	20,3	109

* Refence values at room temperature

Mechanical properties

acc. to EN 1982

Alloy	Casting process and designation	Tensile strength Rm MPa min.	0,2 % Proof strength Rp0.2 MPa min.	Elongation A [%] min.	Hardness HB min.
CB755S/CC755S	Permanent mould – GM	350	180	13	90
	Pressure die cast - GP	310	210	3	100

FINISHING AND PACKAGING

Pallet numbering	**Identified in the label attached to each pallet**
Sampling	**Possibility of shipment of the brass ingot with one polished sample either per pallet or per melting charge with the respective microstructure picture, upon customer's request and agreement.**
Packaging	**The ASBW brass ingots are shipped in wooden euro pallets.** **There standard type of pallet building configuration and weight is three complete rows of ingots, with a total weight between 1100 and 1200 Kg** **Each pallet is protected with a polymeric net all around and steel strapped five times to ensure a secure shipment and material integrity during the transportation.** **Different packaging weights and row configuration possible upon customers request and agreement.**
Identification	**Adhesive label on bundle strap:** **- Customer** **- Number of customer's order** **- EN Standard of the material** **- Alloy identification (International and EN)** **- ASBW material code and LOT number ensuring production tracking** **- Ingot dimensions** **- ASBW's PO number** **- ASBW's Quality Approval Seal**

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For further detailing on technical aspects such as material condition, machining, mechanical data, temper selection through contact to our technical personal.

ASBW

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