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Material Datasheet:
CuZn36Pb-B
(CB770S)

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BRASS INGOTS

CB770S

**Standard alloy
for
dezincification
resistance**

CB770S is the benchmark material for the sanitary industry, when the demand of a material with good corrosion resistance is needed. Matching the latest restrictions for drinking water applications, the 4MS Common Composition List this alloy can also be used to produce parts that are in contact with drinking water.

MATERIAL DESIGNATION

ASBW	International	EN	UNS	JIS	Further Restrictions**
L03	CuZn36Pb-B	CB770S (CC770S)*	-	-	4 MS Common Approach, Part B

REFERENCE CHEMICAL COMPOSITION IN % (MAIN ELEMENTS) *

Material***	Cu	Pb	Ni	Fe	As	Sn	Al	Bi	Zn
L03**	62,0	1,4	0,1	0,1	0,1	0,2	0,6	-	Remainder

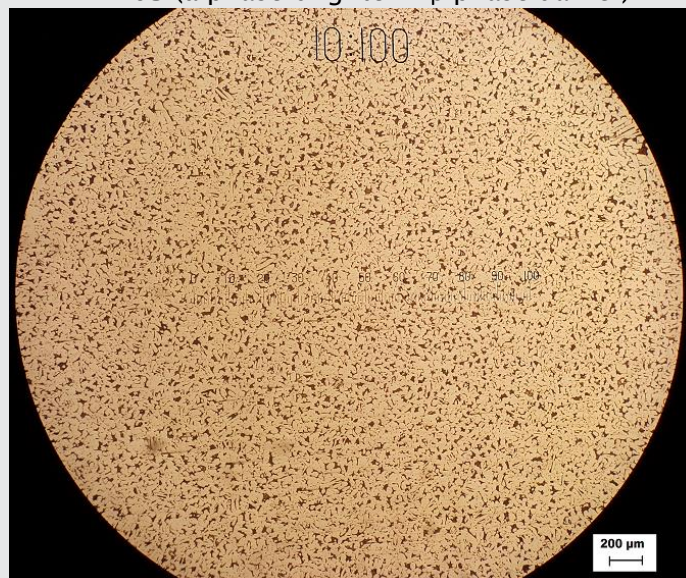
* Deviations from these values may occur within the restrictions of the relevant standard specifications. 200 µm
Elements not listed are complying with EN1982 and 4MS Common Approach if suitable.

** ASBW / L03 ingots are the raw material for cast components of alloy CC770S and complies with the restrictions to the chemical composition of the signed materials in the table, according to the specified in the 4 MS Common Composition List.

*** 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

- L03 (α -phase brighter + β -phase darker):



FABRICATION PROPERTIES

FORMING

Machinability (CuZn39Pb3 = 100 %)	70%
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
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HEAT TREATMENT

Smelting Range	1050 - 1100 °C
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PRODUCT STANDARDS

Ingot	EN 1982
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CORROSION RESISTANCE

The combination of copper content with the presence of the Arsenic this alloy shows very good results on dezincification tests, specially under conditions as warm acidic waters and ammoniacal atmospheres, obtaining a grade A dezincification resistance acc. EN1982. On the castings a soft annealing may be necessary to ensure optimal dezincification resistance.

Physical properties*

Material Density [g/cm ³]	Electrical Conductivity		Thermal Conductivity [W/(m.K)]	Thermal Expansion Coefficient (0 - 300 °C) [10 ⁻⁶ /K]	Modulus of Elasticity [GPa]
	[MS/m]	[% IACS]			
8,46	14,67	25	115	20,5	107

* Reference values at room temperature

Mechanical properties of castings

acc. to EN 1982

Alloy	Casting process and designation	Tensile strength	0,2 % Proof strength	Elongation	Hardness
		Rm	Rp0.2	A	HB
		MPa min.	MPa min.	[%] min.	min.
CB770S/CC770S	Permanent mould - GM	280	110	10	70
	Pressure die cast - GP	340	230	5	110

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	<p>The ASBW brass ingots are shipped in wooden euro pallets.</p> <p>There standard type of pallet building configuration and weight is three complete rows of ingots, with a total weight between 1100 and 1200 Kg</p> <p>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.</p> <p>Different packaging weights and row configuration possible upon customers request and agreement.</p>
Identification	<p>Adhesive label on bundle strap:</p> <ul style="list-style-type: none"> - Customer - Number of customer's order - EN Standard of the material - Alloy identification (International and EN) - ASBW material code - Ingot dimensions - ASBW's PO number - ASBW's Quality Approval Seal

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The end use of this content is up to the user discretion and risk.
For further detailing on technical aspects such as material condition, machining, mechanical data, temper
selection through contact to our technical personal.

The logo for ASBW, with 'ASB' in blue and 'W' in red, all in a bold, sans-serif font.

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