ASBW

Stamping Rod for Optimum Stamping Results

The satisfaction of our customers' requests is the guarantee of our high standards compliance and quality consistency

*Dark and uniform surface appearance of **ASBW** hot stamping rod*

Tailoring the best solutions

With the **ASBW** stamping rod we have achieved to fully meet the compromise between product quality and process efficiency and sustainability.
Optimized rod chemical composition made it possible to answer all the requirements of our customers, being the main distinctive characteristics from the market:

- Homogeneous properties of the production process and the hot stamped parts;
- Lower energy consumption due to low stamping temperatures, without compromising an optimum filling of the mold cavities;
- Enhances process efficiency by minimizing wear of the tool used in hot stamping process and also the surplus material

The **ASBW** stamping rod therefore makes it possible to achieve optimum results in the manufacture of your stamped parts.

The **ASBW** stamping rod is made to order and available in several alloys, being the two best sellers:

- Standard hot-stamping brass CuZn40Pb2 - **ASBW /B13**
- Dezincification-resistant hot-stamping brass CuZn36Pb2As - **ASBW / B10**

The properties of **ASBW / B13** and **ASBW / B10** are according with EN 12165.

To fully meet the requirements of the drinking water standard 4 MS Common Composition List, **ASBW** has a wide range of solutions:

- **ASBW / B02**
- **ASBW / B09**
- **ASBW / B13**
- **ASBW / B14**
- **ASBW / B17**
- **ASBW / B18**
- **ASBW / B19**

Within the entire diameter range of **ASBW** stamping rods, from 10 to 95 mm of diameter, you will find a tailor-made solution to your production process:

- Through decades of investigation, development and expertise, it was possible to develop the chemical composition of **ASBW** stamping rods, specifically for the hot-stamping processes of our customers;
- Guarantee of a uniform rod surface, which enables a consistent and uniform heating of the billets;
- Up to 65 mm of diameter, all rods are produced in the drawn condition, in order to ensure tight diameter tolerances that allows lower process waste rates, greater precision when the billets are being cut to length, therefore being ideal for fully automated production processes;
- Tighter tolerances in rod diameter and length ensure an ideal use of the supplied material, minimizing waste material and maximizing profitability.

Technical service

At **ASBW** we see our customers as business partners. Considering that, we supply not only brass rods but also our expertise and technical know-how that results from decades of experience and research. Our commitment is on-time discussion of any aspect of your production from the planning stage, providing you with detailed information about product properties, further processing and delivery options.

Quality and environment

ASBW has a certified quality management system in place according to EN ISO 9001:2015 and it is committed to its customers in continuously improve the quality of production.

Environment is a concern and global responsibility, to which **ASBW** is compliant with. **ASBW** adopts a policy of Social Responsibility, reducing the environmental impact of its activities. Believing in the compatibility between technological progress and environmental preservation, we are licensed at environmental level with APA (Environmental Agency) license number 86120.

Best-selling alloys:

Material designation					Reference Chemical Composition in %(p/p) (Main Elements)			
ASBW	**International**	**EN**	**UNS**	**JIS**	**Cu**	**Pb**	**As**	**Zn**
B10*	CuZn36Pb2As	CW602N	C35330	-	62,0	2,0	0,1	rem.
B13**	CuZn40Pb2	CW617N	C37800 C38000	C3603 C3604	58,0	2,0	-	rem.

* Dezincification resistance is achieved through a β-phase-free microstructure. Therefore, a 550 °C/4h heat treatment of the parts is recommended after stamping.
** Restrictions to the chemical composition according to 4 MS Common Composition List, for drinking water applications, on customer request.

Furthermore, **ASBW** offers different products for the most demanding and specific applications:

- **ASBW** / **B14 -** for parts demanding extensive machining after the hot stamping process
- **ASBW** / **B22 –** low lead, high-strength and fair machinability brass
- **ASBW** / **B09 -** for parts that are subjected to cold forming after the hot stamping process

All available alloys:

	Material Designation						Reference Chemical Composition in %(p/p) (Main Elements)***										
	ASBW	International	EN	UNS	JIS	FURTHER RESTRICTIONS*	Cu	Pb	Ni	Fe	As	Sn	Al	Bi	Mn	Si	Zn
Lead Containing Alloys	B02*	CuZn35Pb1.5Al As	CW625N	-	-	4 MS Common Approach, Part B	63,0	1,4	0,1	0,2	0,1	0,2	0,6	-	-	-	Rem.
	B05	CuZn40Pb1Al	CW616N	C37710	C3771	-	58,0	1,5	0,1	0,1	-	0,1	0,2	-	-	-	Rem.
	B06	CuZn39Pb2Sn	CW613N	-	C3771	-	59,5	2,1	0,2	0,2	-	0,4	0,05	-	-	-	Rem.
	B07	CuZn39Pb1	CW611N	-	C3771	-	59,5	1,2	0,2	0,2	-	0,2	0,03	-	-	-	Rem.
	B08	CuZn39Pb0,5	CW610N	C36500	C4641	-	60,0	0,5	0,2	0,1	-	0,2	0,03	-	-	-	Rem.
	B09 *	CuZn39Pb2	CW612N	C37700	C3771	4 MS Common Approach, Part B	59,5	2,0	0,2	0,2	-	0,2	0,03	-	-	-	Rem.
	B10	CuZn36Pb2As[a]	CW602N	C35330	-	-	62,0	2,3	0,2	0,1	0,1	0,1	0,03	-	-	-	Rem.
	B13 *	CuZn40Pb2	CW617N	C37800 C38000	C3603 C3604	4 MS Common Approach, Part B	58,0	2,0	0,2	0,2	-	0,2	0,03	-	-	-	Rem.
	B14 *	CuZn39Pb3	CW614N	C38500	C3603 C3604	4 MS Common Approach, Part B	58,0	3,0	0,2	0,2	-	0,2	0,03	-	-	-	Rem.
	B15	CuZn38Pb2	CW608N	C37700	C3771	-	60,5	2,0	0,2	0,1	-	0,1	0,03	-	-	-	Rem.
	B16	CuZn38Pb1	CW607N	C37000	C3712	-	60,5	1,0	0,2	0,1	-	0,1	0,03	-	-	-	Rem.
	B24	CuZn37Mn3Al2 PbSi	CW713R	C67420	C6782	-	58,0	0,5	0,5	0,5	-	0,2	1,8	-	1,0	0,7	Rem.
Low Lead Alloys	B17 *	CuZn42	CW510L	C28500	-	4 MS Common Approach, Part B	58,0	0,1	0,2	0,2	-	0,2	0,03	-	-	-	Rem.
	B18 *	CuZn40	CW509L	-	C3712	4 MS Common Approach, Part B	60,0	0,1	0,2	0,1	-	0,1	0,03	-	-	-	Rem.
	B19*	CuZn37	CW508L	C27200	C2800	4 MS Common Approach, Part B	63,0	0,1	0,2	0,1	-	0,1	0,03	-	-	-	Rem.
	B20	CuZn38As[a]	CW511L	C27453	-	4 MS Common Approach, Part B	62,5	0,1	0,2	0,1	0,1	0,1	0,03	-	-	-	Rem.
	B22	CuZn40Bi0,7Al0, 5Pb0,1**	According to SDWA of EPA****	-	-	-	58,0	0,1	0,2	0,2	-	0,1	0,03	0,7	-	-	Rem.
	B23	CuZn40Bi0,7Al0, 5Pb0,2**	According to SDWA of EPA****	-	-	-	58,0	0,2	0,2	0,2	-	0,1	0,03	0,7	-	-	Rem.

*** For drinking water applications, there are restrictions to the chemical composition the materials listed in this table according to the specified in the 4 MS Common Composition List. In this case on the ordering information must be specified the reference for DW (drinking water). This information is mandatory in the case in which the product is used in drinking water applications according to the 4 MS Common Composition List and not to be given on the in the other cases.**

**** Internal Designation.**

***** Deviations from these values may occur within the restrictions of the relevant standard specifications.**

****** Environment Protection Agency (EPA), Safe Water Drinking Act (SDWA) - ANSI/NSF Standard 61 and Copper Development Association (CDA)**

[a] Dezincification resistance is achieved through a β-phase-free microstructure. Therefore, a 550 °C/4h heat treatment of the parts is recommended after stamping.

Mechanical properties

The **ASBW** stamping rod is supplied in the drawn condition for diameters up to 65 mm. For dimensions above 65 mm, the rods are supplied only extruded, not drawn.

The delivery material condition for **ASBW** hot stamping rod is "M", in accordance with EN 12165, that is without specified mechanical properties.

Processing information

Recommended stamping temperature range for the most relevant alloys:

ASBW / B10	740-850 °C
ASBW / B13	640-740 °C

One of the most relevant parameters to control in the hot stamping process is temperature. Therefore, an accurate adjustment of the emission coefficient for pyrometer measurement is advised. In the temperature range between 650 and 850 ºC, **ASBW** hot stamping rods have revealed a relatively constant emissivity of 0,68, according to the tests carried out on the different alloys. This value is merely given for reference, attending to variations in measurement between pyrometers.

Geometric properties

Dimensions and tolerances for Round Rods						
Diameter (mm)	**Tolerances**		**Straightness (According to EN 12165)**	**Note**	**Type of End Shaping**	**Lengths (mm)**
	Diameter (mm)	**Class (According to EN 12165)**				
10-18	±0.14	B	1,5 mm (localized over any 400 mm length)	Extruded and Drawn	Both ends sawn without burr	3000±50 (more lengths possible up to 5000 mm upon costumer's request)
>18-30	±0.17	B				
>30-50	±0.20	B				
>50-65	±0.20	B*				
>65-70	±0.50	A*	Up on agreement between customer and supplier	Only extruded, not Drawn		
>70-95	±0.70	A*				

* Up to this ranges that have tighter tolerances than specified on EN 12165

Labeling

In order to ensure, the traceability according to NP EN ISO 9001:2015, each bale (wooden box or bundle) is marked with a label indicating the details mentioned below:

- customer
- number of customer's order
- EN Standard of the material
- **ASBW** material code
- rod length
- **ASBW**'s PO number
- **ASBW**'s Quality Approval Seal

Packaging

All **ASBW** hot stamping rods are supplied by standard in bundles either of approximately 1.000 kg or 500 kg. Different bundle weights are also possible upon costumer's request. Each bundle is steel strapped three times on cardboard and both ends are protected with burlap, to ensure the material integrity during the transportation.