



# ***METAL CONNECTS:*** ***ALUMINUM BRONZES*** ***& COPPER ALLOYS***

ALLOYS IN PREMIUM QUALITY, CNC PROCESSING,  
TAILORING, SERVICE

# ALBROMET – THE SPECIALIST FOR ALUMINUM BRONZES AND COPPER ALLOYS

*Your specialization is in metal forming tools such as bending, stamping, forming, and deep drawing of stainless steel sheets or tubes? You customize mold cores and mold inserts in the plastic industry? You provide guides and other sliding elements for hardened steels? Then ALBROMET is the right partner for your business. Our range of aluminum bronzes and copper alloys covers almost all of your applications. As you already know: The advantages of this material compared to other materials are technically convincing.*

The aluminum bronzes and copper alloys of ALBROMET are highly developed materials from the world's best producers. Our products are "Made in Germany" or come from leading international manufacturers such as Concast / USA.

The semi-finished products of ALBROMET are offered in continuous casting, pressed, cast, or forged.

The technical highlight of this product group is our HSC bronzes. HSC stands for High Speed Cutting: With these materials, a higher metal removal rate can be achieved independent of the machine.

ALBROMET offers these materials from 290-380 HB (Brinell hardness).

## SIGNIFICANT DIFFERENCES

The difference to other aluminum bronzes:  
The high-quality production of the material.  
The machining is improved significantly and measurably during the production process by chip-breaking additives.

### The following points support the use of HSC bronzes:

- A reduction of tool wear by up to 60%
- 40 % shorter processing times
- 25% to 40 % longer service life

## GREEN ALLOYS – ACTIVE ENVIRONMENTAL PROTECTION WITH ALBROMET 200

Green Alloys are materials which contain little or no nickel, tin, or lead, and, therefore, are particularly environmentally friendly both in production as well as in recycling.

**GREEN ALLOYS™**

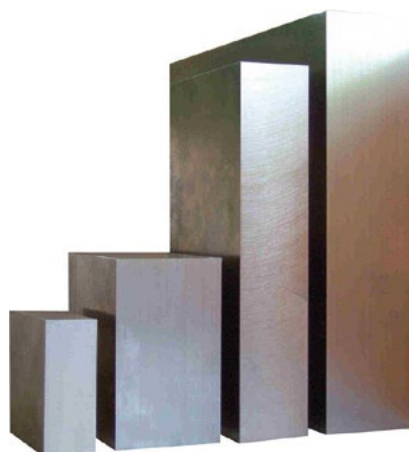
**Choose the best tribology, service life, environmental protection, and use of resources!**

ALBROMET 200 nickel-free aluminum bronze is a material of the type Green Alloys with excellent technical properties.

ALBROMET 200 has proven itself in the areas machine, aircraft, and shipbuilding, in water supply, as well as in the petrochemical and plastics technology.

ALBROMET 200 is approved for the food industry, as this material is absolutely nickel, tin, and lead free.

ALBROMET 200







# ALBROMET SERVICE

*Benefit from cheaper premium quality, fast availability through customer-oriented storage, and excellent professional advice.*

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## ALBROMET CUTTING CENTER

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Whatever size you need: We will fulfill your every wish. Our cutting center, located in Geretsried, provides timely implementation – even for the smallest material cuttings.

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## ALBROMET PROCESSING SERVICE

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From boring to complex 3D contours – ALBROMET realizes processing in both small and large quantities – exactly to your specifications. Through the expertise and experience of ALBROMET, an excellent cost-benefit ratio is achieved.

According to the highest quality standards, we manufacture flanges in special sizes, moldings with special contours as well as rings, sockets, or adapters to your requirements – please contact us about your needs.

We are known for good service, highest competence, and flexibility – and for excellent customer service.

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## ALBROMET CONSULTANCY

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ALBROMET Consultancy: We also help you develop solutions for production systems and end products that can not be realized due to special requirements with conventional materials.

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## TUBE BENDING TOOLS

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Depending on the application and tube material, ALBROMET offers flexible mandrels and wiper dies from different materials. We place emphasis on the highest quality of materials to minimize wear and to make the precision fitting for all machining operations as high as possible.





# MATERIALS

## ALUMINUM BRONZES

Alloy	Element Analysis Weight Percent Residual – CU					Standards Specifications	Delivery forms	Mechanical and Physical Properties			
								Brinell hardness	Tensile strength Rm	Yield strength Rp 0.2	Yield strength Rp 0.2
	Al	Fe	Ni	Mn	Other			HB 30	N/mm <sup>2</sup>	N/mm <sup>2</sup>	%
ALBROMET 200	11	4			0.5	CuAl10Fe EN 1982 / DIN 1714 ASTM B505 C95400	Forgings	200	700	350	> 8
							Semi-finished	180-190	> 586	> 221	> 10
ALBROMET 220 NI	10	4	5	1.5	0.5	CuAl10Ni5Fe4 EN CW307G 2.0966	Forgings	220	700	360	> 12
							Semi-finished	170-190	> 650	> 280	> 13
ALBROMET 260 NI	11.5	5	6	0.6	0.5	CuAl11Fe6Ni6 EN CW 308 G 2.0978	Forgings	220-260	800	500	> 4
							Semi-finished	220-260	800	600	> 8
ALBROMET 300	13	4			2	Non-standardized	Forgings	300	> 560	> 470	1
							Semi-finished	300	> 560	> 470	1
ALBROMET 300 HSC	13	4			2	Non-standardized	Forgings	300	> 900	> 350	5
							Semi-finished	300	> 900	> 350	5
ALBROMET 340	14	4			2	Non-standardized	Forgings	340	> 630	> 500	0.5
							Semi-finished	340	> 630	> 500	0.5
ALBROMET 340 HSC	14	5			3	Non-standardized	Forgings	340	> 650	> 400	2
							Semi-finished	340	> 650	> 400	2
ALBROMET 380	15	4			5	Non-standardized	Forgings	380	> 680	> 560	< 0.5
							Semi-finished	380	> 680	> 560	< 0.5
ALBROMET 380 HSC	15	5			4	Non-standardized	Semi-finished	385	> 650	> 400	2

The alloy designation gives an indication of the Brinell hardness. Other properties according to the material data sheet.

## HIGH-CONDUCTIVITY COPPER

Alloy	Element Analysis Weight Percent Residual – CU						Normen Spezifikationen	Delivery forms	Mechanical and Physical Properties			
									Brinell hardness	Tensile strength Rm	Yield strength Rp 0.2	Yield strength Rp 0.2
	Be	Co	Cr	Ni	Si	Other			HB 30	N/mm <sup>2</sup>	N/mm <sup>2</sup>	%
W 130	2.0					0.5 max.	EN CW 101 C Typ A4/2 2.1247 CuBe2	Forgings Semi-finished	360 (-40 HRC)	1250	1000	3
W 164							CuNiCrSi Non-standardized	Forgings	285 (30 HRC)	860	720	8
W 200			0 - 0.5	2.5	0.7		EN CW 111 C / CW 112 C similar 2.0855 / 2.0857 CuNiCrSi	Forgings Semi-finished	190-220	> 600	500	> 10
W 240							similar CuCo1Ni1Be	Forgings Semi-finished	230-260	650	500	8

The alloy designation gives an indication of the thermal conductivity. Other properties according to the material data sheet.

# APPLICATIONS

○ = Recommended ● = Preferred Recommended

METAL WORKING		Tube Bending / Tube Forming				Sheet Metal Forming Deep Drawing					Mechanical Engineering							
Alloys		Wiper Die	Mandrels	Bending Balls	Form & Profiling Rollers	Drawing Dies	Blank holder	Stamp	Folding	Molding	Bearing Brushes	Guides	Spindle Nuts	Worm Gears	Pressure Fittings	Welding Equipment	Valve Guides	Sliding Plates
hard	ALBROMET 200	●									●	●	●	●		●	●	●
	ALBROMET 220 Ni	○									○	○	●					○
	ALBROMET 260 Ni	○										○						○
brittle	ALBROMET 300		○	○								○			●			
	ALBROMET 340																	
	ALBROMET 380				●	●	●	●	●	●								
	ALBROMET 300 HSC		●	●														
	ALBROMET 340 HSC		○															
	ALBROMET 380 HSC																	
		Choice of material depends on the required service life										Choice of material depends on mating material and load: difference in hardness min. 60-100 HB						

PLASTICS TECHNOLOGY																	
		Cooling / Tempering							Guiding					Demolding			
		Blow molding	Infection molds	Thermoforming	Mold cores	Mold inserts	Spiral cores	Hot-runner nozzles	Guide sockets	Oblique wedges	Ejector plate	Ejector bolt	Guide rails	Wiper / Seal	Lowering elements	Slide elements	Slide
Alloys																	
hard	ALBROMET 200	○	○		○	○			●	●	●	○	●	●	●	●	●
	ALBROMET 220 Ni	○	○		○	○											
	ALBROMET 260 Ni													○			○
brittle	ALBROMET 300								○	○	○	○	○	○		○	○
	ALBROMET 300 HSC								○	○	○	○	○	○		○	○
High-conductivity Copper	ALBROMET W 130	○	●	○	●	●	○	●									
	ALBROMET W 164	○	●	○	○	●	○	○									
	ALBROMET W 200	○	●	○	●	●	●	○									
	ALBROMET W 240	○	○	○	○	○	●	●									

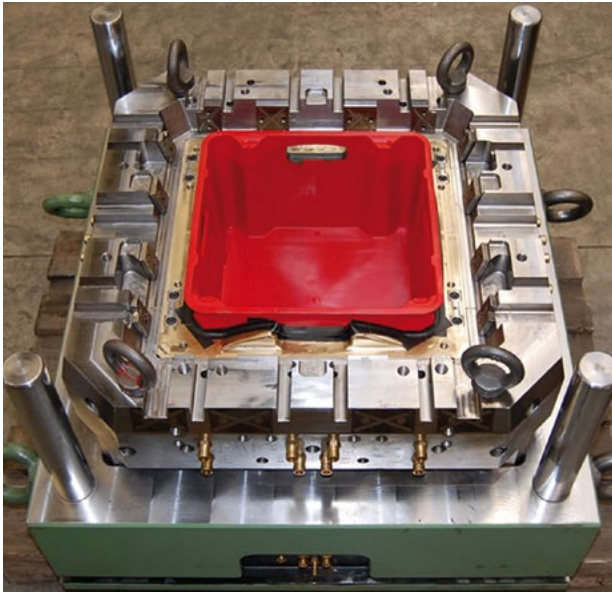
The alloy designation gives an indication of the thermal conductivity. Other properties according to the material data sheet.

# ALBROMET IN PLASTICS TECHNOLOGY

***For each challenge in the plastics industry, especially in injection molds and associated cooling problems, you will find a sophisticated solution at ALBROMET.***

High-conductivity copper alloys allow better tempering, demoldability is optimized, and at a lower adhesion tendency. High-conductivity copper alloys for mold cores, inserts, and panels possess particularly good

With special copper alloys such as W164 and W200, injection cycles are optimized and production times are accelerated. Due to the high conductivity of the materials used, consistently high quality is achieved.



ALBROMET – copper alloys have an optimal balance between thermal and electrical conductivity. Our conductivity copper alloys have a high hardness up to 40 HRC (Rockwell hardness). In addition, they can be coated and thus resistant to abrasive wear.

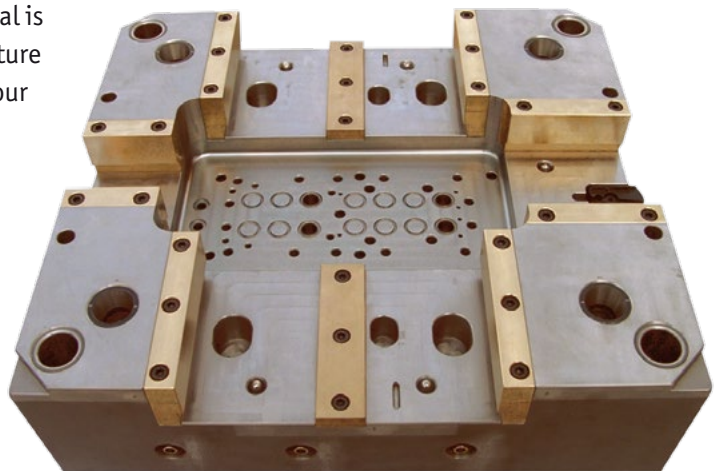
## **The technical advantages of the ALBROMET copper alloys:**

- Best thermal conductance
- There are little or no deposits formed
- Effective increase of the service life of injection molds
- A rapid response behavior of the temperature control
- The surface of the plastic, injection, and blow molded parts is significantly improved
- Shorter injection times by the uniform heat distribution in the mold
- Functional interfaces which provide wear protection

thermal conductance. Therefore, they are the first choice for the demanding requirements in the field of plastics technology.

Heating and cooling in the plastic parts manufacturing takes the largest proportion of time to complete. Here, the thermal conductivity of the used material is of particular importance. The higher the temperature control speed, the greater the energy savings – your energy costs are reduced detectable.

*Mold plate with sliding inserts  
from ALBROMET 200*



# ALBROMET IN MECHANICAL ENGINEERING AND METAL FORMING

*ALBROMET not only provides semi-finished and raw materials, but also produces a wide variety of tools specific to individual requirements.*

## MECHANICAL ENGINEERING

ALBROMET has made a name in Germany and Europe in mechanical engineering. The production of finished parts for sliding elements, clamping and moving parts, and guides is appreciated in all areas of industry. This applies to new and replacement parts for steel rolling mills as well as gripping and positioning elements for a variety of machines.



Our customers from different industries benefit from the superior characteristics of the processed material. In the food processing industry, ALBROMET machine components ensure that products do not stick.

In the demanding pharmaceutical industry, the metal meets the highest standards in hygienic areas, as it is non-magnetic, causes the least wear, and has very good thermal conductivity.

### **The ALBROMET advantages in mechanical engineering:**

- Excellent sliding properties, high stability and excellent emergency running properties and thus high durability
- Improvement of the lifetime for all machines through the use of sliding and guiding elements of aluminum bronze
- Reduced downtime and set-up times
- Minimization of the risk of production downtime

## FORMING TECHNOLOGY

Tools for the forming of stainless steel sheets are made from ALBROMET alloys. Here, the high hardness ALBROMET 300 to 380 materials have proven themselves for a long time.

Depending on the size of the components, forging or casting parts are recommended as sheet metal holder, die, or stamp.

In the field of forming / tube bending, we offer you a detailed brochure.

### **The ALBROMET advantages in forming technology:**

- Low to adhesion
- High dimensional stability
- Excellent durability

*Finished ring from  
ALBROMET 380*







## ***ALBROMET ADVANTAGES AT A GLANCE***

- Wide range of highly advanced materials from one source.
- Large Material Stock: Our extensive stocks ensures our ability to deliver.
- 24-hour Cutting Service: In the ALBROMET cutting center, round material up to a diameter of 500 mm and flat material up to 500 x 1000 x 2000 mm is cut within 24 hours for you.
- Shipping dimensions according to your needs: The extensive machinery of ALBROMET makes it possible to produce your desired dimensions in no time.
- Individual customer service, flexibility, quality, and maximum benefit of our products.
- Personal and professional technical support.

**Our client portfolio speaks for itself. We supply and produce, among others, for Audi, BMW, Bosch, Fissler, Kettler, MTU, Opel, Playmobil, Thyssen Krupp, WMF, and VW.**

**The ALBROMET company's philosophy is to partner with employees, customers, and suppliers.**

**Our motto is: "METAL CONNECTS"**

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