

Coils

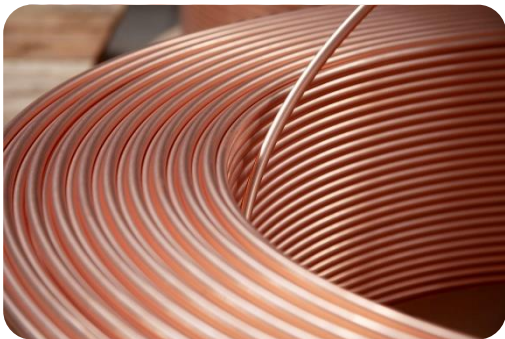
for Cold Forming Welding
Applications

Lba

lebronze alloys

Specialty alloys

Our 3 solutions to cover all your needs



- **CuCrZr - C18150**
The market standard solution with high purity
- **CuCrZr - C18148**
The Powerode+® premium solution for welding of steel sheets with very high purity
- **CuCrZr - C18147**
The Alrode® premium innovative solution for welding of steel sheets and aluminum sheets with very high purity

Standard dimensions for coils

19,4 mm - 3/4"

15,4 mm - 5/8"



Why choose Lebronze alloys ?

Large range

A **complete range** of welding coils
from 10 to 20 mm OD

Quality

LBA is the **only manufacturer** on the market to offer **3 different qualities of CuCrZr coils**.

Fully integrated

LBA manufacturing process for coils is **fully integrated**: casting, cold working stage, heat treatment and non-destructive testing. Being fully integrated ensures **reactivity** and **complete traceability**.

Big size

A **400 kg seamless standard coil**, with the possibility of adapting to the customer's request, which allows you to **reduce the coil replacement frequency** and optimize your productivity.

Comparison of Lebronze alloys Coils dedicated to Welding solutions

Comparison of Lebronze alloys Resistance Welding solutions

Technical Advantages	CuCrZr - C18150	CuCrZr - C18148	CuCrZr - C18147
Avoid sticking effect	•	•	•
Avoid mushrooming	•	•	•
Higher resistance to softening	•	•	•
Better pressure resistance	•	•	•
Higher conductivity		•	•
Higher Hardness		•	
Last longer		•	•
Optimal properties for welding steel and aluminum			•

Measurements made in laboratory conditions. Non contractual.

Large range of dimensions

Lebronze alloys manufactures a large range of welding coils from 10 to 20 mm OD upon request.

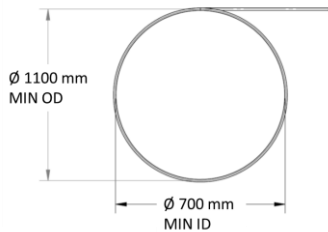
Standard decoiling direction

Anti-clockwise decoiling



Type of delivery and packing

OD mini 1100 mm
ID mini 700 mm
Height maxi 500 mm



Alloys table

Alloy	Standards Nearest international standards	Nominal composition %						Physical properties						Mechanical properties								
		Cu	Cr	Zr	Fe	P	Others	Density	Electrical conductivity %IACS	Electrical resistivity at 20°C $\mu\Omega\text{cm}$	Thermal conductivity 20° to 200°c W/mk	Coefficient of expansion 20° to 200° c x 10 ⁻⁶ K ⁻¹	Relative magnetic permeability	Young's modulus kN/mm ²	Tensile strength		Yield strength 0.2% offset or 0.05% E.U.L.L.		Elongation 565 .IS	Hardness		
															Mpa	ksi	Mpa	ksi		%	≥ HB	≥ HV
ALRODE CuCrZr	UNS C18147	remainder	0.15 to 0.35	0.02 to 0.05			≤0.04	8.9	≥ 88	≤1.96	370	17.5	1.01	120	420	61	380	55	18	135		75
POWERODE®+ CuCr1Zr	UNS C18148 RWMA class 2 AWS J1.3/J1.3M class 2 SAE CA 184 BS 2874 CC 102 EN 12163, EN 12165, EN 12420, EN 12167 CW106C, CW105C DIN 17666 WN 2.1293 DIN 17672 DIN 44759 NFA 82100 ISO 5182 A2/3 ISO 1336	remainder	0.5 to 0.8	0.03 to 0.10	≤ 0,01	0.004 to 0.02	≤0,04	8,9	≥80/ ≥85 ⁽¹⁾	≤2.15/ ≤ 2.03 ⁽¹⁾	350	17.5	120		480	70	420	61	18	150	150	80
POWERODE®+ CuCr1Zr	UNS C18150 RWMA class 2 AWS J1.3/J1.3M class 2 SAE CA 184 BS 2874 CC 102 EN 12163, EN 12165, EN 12420, EN 12167 CW106C, CW105C DIN 17666 WN 2.1293 DIN 17672 DIN 44759 NFA 82100 ISO 5182 A2/3 ISO 1336	remainder	0.5 to 0.8	0.03 to 0.10	≤ 0.08		≤0.15	8.9	≥80%	≤2.15	340	17.5	1.01	120	450	65	380	55	18	145	145	77

Note: (1) average

All materials are in the fully heat treated and hardened condition. Coil hardness is determined at mid radius.

Recognized experience and innovation



For over 50 years, Lebronze alloys has been an international reference in the Automotive industry for resistance welding products.

Being a major partner to almost all car builders involves important duties: not only manufacturing high quality alloys and electrodes but also by being a pioneer in innovation. Our group has always been committed to a process of continuous improvement.



Large range of Resistance Welding products

Lebronze alloys also manufactures a large range of male and female spot-welding electrodes, round bars, flat bars, plates, welding wheels, and any kind of engineered products.

- Rods and hollows from 8 to 380 mm OD
- Flats, squares and plates from 10 mm thickness
- Seam welding wheels up to 900 mm OD
- Stamped and machined connectors for welding guns



Lebronze alloys was born from the integration of companies specialized in the production of copper alloys, copper, nickel alloys, aluminum, special steel, stainless steel, titanium and super alloys.

Thanks to its multidisciplinary know-how, the Group provides innovative solutions to all major industries such as Aerospace, Oil & Gas, Energy, Off-highway Mining and Railways, but is also present in sectors that manufacture personal equipment.

Our 8 production sites and 850 employees master a unique range of metal processing technologies: continuous and semi-continuous casting, sand casting, chill casting (manual, mechanized, robotic), centrifugal casting, extrusion, ring rolling, hot and cold rolling, drawing, free forging, forging, die stamping, stamping, heat treatment, cold stamping, machining, non-destructive tests, etc.

Offering a solution that is suited and optimized to the needs of each industry is our Group's commitment.