PRODUCT
CATALOG
Rods & Wires

26

lebronze alloys

VOLUME 1

Coppers, Brasses,
Nickel-silvers
and Bronzes

Contents

1. LEBRONZE ALLOYS PRESENTATION 4-13

About Lebronze alloys . . . 4
History of the Group . . . 5
Our worldwide footprint . . . 6
Product range at a glance . . . 8
Services offered by our service centers worldwide . . . 10
Our culture of quality . . . 11
Our environmental commitment . . . 12

2. CuZnNi NICKEL SILVER ALLOYS 14-15

Niclal®120 | CuNi12Zn24 | C75700 . . . 16
Niclal®180 | CuNi18Zn21 . . . 17
EnviN1 | CuNi12Zn38Mn5 . . . 18
ENVN0701 | CuNi7Zn42 . . . 20
NM2 | CuNi7Zn39Pb3Mn2 . . . 22
NM436 | CuNi11Zn37Mn5Pb2 . . . 24

3. CuSn TIN BRONZES 26-27

BZ3 | CuSn4 | C51100 . . . 28
BZ5 | CuSn5 | C51000 . . . 30
BZ6 | CuSn6 | C51900 . . . 32
BZ8 | CuSn8 | C52100 . . . 34
BP5 | CuSn5Pb1 | C53400 . . . 36
BZ4 | CuSn4Pb4Zn4 | C54400 . . . 38
BZ4 ZeST® | Proprietary . . . 40

4. CuZn SPECIAL BRASSES 42-43

SML60 | CuZn40MnSi . . . 44
SML61 | CuZn39Mn1SiSn . . . 45
SMBKM | CuZn35Ni3Mn2AlPb . . . 46
SM58 | CuZn37Mn3Al2PbSi . . . 48

5. CuZn MACHINABLE UNLEADED BRASSES 50-51

EnviB1 | CuZn40 . . . 52
EnviB10 | CuZn40 . . . 54
EA | CuZn40 | CZ109 . . . 56
Z40 | CuZn40 | CZ109 . . . 58
EnviB10AM | CuZn40 - antimagnetic . . . 60
EnviB58 | CuZn42 . . . 62
EnviB158 | CuZn42 . . . 64
Z42 | CuZn42 . . . 66
S42 | CuZn42 . . . 68
EnviB ECO | CuZn21Si3P | C69300 . . . 70

Contents

6. CuZn UNLEADED BRASSES 72-73

E63S | CuZn37 | C27200 . . . 74
E63FS | CuZn36 | C27000 . . . 76
E70 | CuZn30 | C26000 . . . 78
E80 | CuZn20 | C24000 . . . 80
E85 | CuZn15 | C23000 . . . 82
E90E | CuZn10 | C22000 . . . 84
E95 | CuZn5 | C21000 . . . 86

7. CuZnPb STANDARD BRASSES 88-89

58D | CuZn39Pb3 | C38500 . . . 90
60M | CuZn38Pb2 | C37700 . . . 92
60AM | CuZn38Pb2 - antimagnetic | C37700 . . . 94
61A | CuZn36Pb3 . . . 96
62A | CuZn35Pb2 | C34200 | C34500 . . . 98

8. Cu PURE COPPERS 100-101

CUOF | Cu-OF | C10200 . . . 102
CUSC | Cu-ETP1 | C11040 . . . 104
ECU | Cu-ETP | C11000 . . . 106

9. TABLE: RODS AND WIRES PRODUCT PORTFOLIO 108-109

About Lebronze alloys

Lebronze alloys is a world leader in the development and **fully integrated production of performance materials for critical applications.**
Thanks to a multidisciplinary know-how, the Group provides innovative solutions to all major industries such as aeronautics, electronics, space, automotive, energy, among others.

Our 8 production plants combine a unique range of metal processing technologies, while our 6 service centers ensure global product availability with outstanding customer support.

The Group's commitment is to find appropriate and optimized solutions for every sector's requirements while optimizing the environmental impact of our products.
Lebronze alloys distinguishes itself through a constant focus on quality to serve the most demanding critical applications (e.g. landing gear bushings, high-performance connectors, etc.).

Performance materials for critical applications

Fully integrated production process

Optimized environmental impact of our products

KEY FIGURES

- **8 production plants**
- **6 service centers**
- **1000 employees**
- **+250 alloys produced**
- **300 M€ turnover**

History of the Group

2006

The DUMONT family, some private investors as well as some key managers, take over "Le Bronze Industriel", a company founded in France in 1934 specializing in copper alloys production.
This change of ownerships, with Michel DUMONT as active Chairman, marked a **new period of strategic growth for the company.**

2012-2016

Period of massive external growth for the company. Several major acquisitions are made such as Inoforges, Swissmetal Lüdenscheid and CLAL. These acquisitions consolidated our metallurgical expertise through a sharing of experience.

2016

Le Bronze Industriel officially becomes Lebronze alloys.

2020

Opening of our first service center in Europe at Aldridge (UK). This service center joins an already well-established network of distributor partners around the globe and enables us to provide a greater responsiveness to our customers' needs.

2022

Marks the end of a 2-years industrial repositioning allowing the Group to focus on performance materials for critical applications.

2023-2024

Lebronze alloys has strengthened its distribution network by opening three new service centers: **Lebronze alloys Services Europe** in Breteuil (France), **Lebronze alloys North America** in Warwick, RI (USA), and **Lebronze alloys** India in Bangalore (India).

2025

Majority stake acquired by Astorg. Launch of a new external growth phase with the acquisition of four key international companies: **Allied Copper Alloys Ltd** (UK), **AW Fraser Ltd** (New Zealand), **mLego** (France), and **MEA** (France).

Our worldwide footprint

- *Production plants*
- *Service centers*

Bornel
France

Breteuil
France

LBA Services Europe
France

Suippes
France

mLego
France

MEA
France

Paris
Corporate headquarters

LBA NA
USA

LBA UK
England

Lüdenscheid
Germany

Rydzyna
Poland

LBA India
India

LBA Asia
China

AW Fraser
New-Zealand

LBA Oceania
New-Zealand

Product range at a glance

Lebronze alloys offers **more than 250 copper-based and nickel-based alloys** with unique properties which meet the most complex requirements. We supply these alloys in different forms:

Billets

Bars

Hollow bars

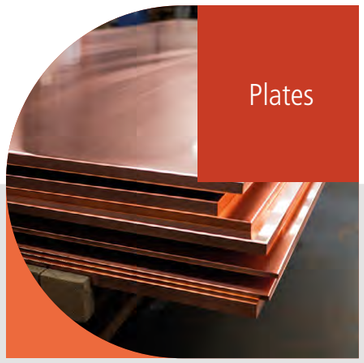
Strips

Sheets

Rods

Wires

Standard & complex profiles


Plates

Welding electrodes

Marine tubes & fitting

Machined blanks and parts

A fully integrated value chain delivering excellence

One of the Group's major strengths lies in its **fully integrated production process**, from upcycling and melting to servicing.

This particularity guarantees traceability optimization and strict control of the final properties of our materials so they can comply with the most stringent requirements.

Upcycling and casting

- Internal & external recycling
- Semi-continuous casting
- Continuous wire casting
- Continuous bar casting
- Centrifugal casting
- Continuous strip casting

Hot forming

- Extrusion
- Hot rolling
- Free forging

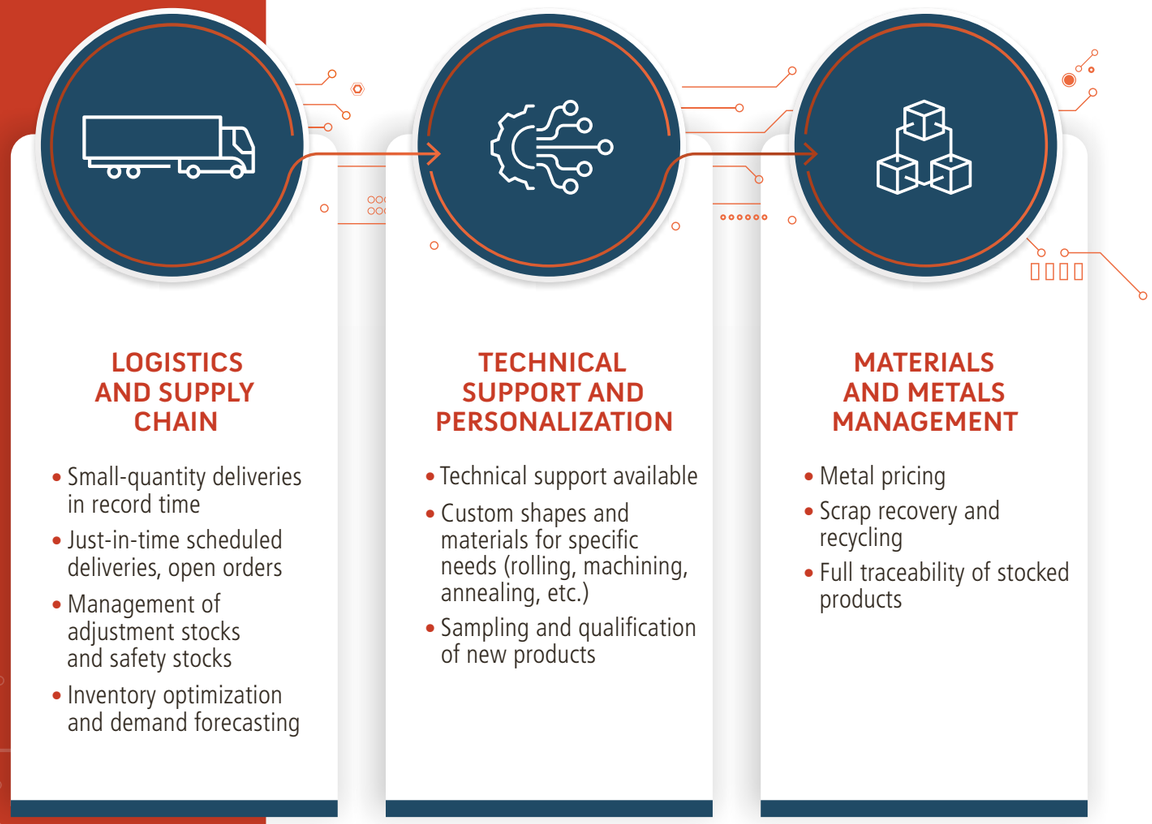
Cold forming

- Drawing
- Straightening
- Cold rolling
- Heat treatments

Blanks and components

- Hot stamping
- Cold stamping
- Cold heading
- Machining

Services offered by our service centers worldwide



LOGISTICS AND SUPPLY CHAIN

- Small-quantity deliveries in record time
- Just-in-time scheduled deliveries, open orders
- Management of adjustment stocks and safety stocks
- Inventory optimization and demand forecasting

TECHNICAL SUPPORT AND PERSONALIZATION

- Technical support available
- Custom shapes and materials for specific needs (rolling, machining, annealing, etc.)
- Sampling and qualification of new products

MATERIALS AND METALS MANAGEMENT

- Metal pricing
- Scrap recovery and recycling
- Full traceability of stocked products

Our culture of quality

Lebronze alloys develops for all its activities a formally recognized quality management system that alows us to:

- **Guarantee** the traceability of our products, from raw material to the product delivered
- **Certify** our products properties
- **Control** our delivery times

Our state-of-the-art quality control equipment includes:

- **Metallurgical tests** such as tensile, impact, hardness, bending, and others
- **Non destructive tests** such as Magnetic Particle Inspection (MPI), ultrasonic contact testing, liquid penetrant inspection, and others
- **Metrology, geometry and surface tests** such as surface metrology, global CMM (DEA), profile projectors, and others

Our certifications

All our certificates can be consulted on our website

Aerospace certifications

Nadcap Administered by PRI ACCREDITED HEAT TREATING

Certified site:
Suippes, FR

afaq EN/AS/JISQ 9100 Aéronautique AFNOR CERTIFICATION

Certified sites :
Boëssé-le-Sec, FR; Suippes, FR

AEROSPACE STANDARD AS9120:B

Certified service centers : Lebronze alloys UK, Lebronze alloys North America, Lebronze alloys Asia, Lebronze alloys Services Europe

General certifications

afaq ISO 9001 Qualité AFNOR CERTIFICATION

Certified sites: Lüdenscheid, DE*; Boëssé-le-Sec, FR; Bornel, FR; Breteuil, FR; Doulaincourt-Saucourt, FR; Suippes, FR; Christchurch, NZ*, Rydzyna, PL*

afaq ISO 14001 Environnement AFNOR CERTIFICATION

Certified sites: Lüdenscheid, DE*; Breteuil, FR; Suippes, FR; Rydzyna, PL*; Christchurch, NZ*;

afaq ISO 45001 Santé Sécurité au Travail AFNOR CERTIFICATION

Certified sites:
Bornel, FR; Suippes, FR

afaq ISO 50001 Énergie AFNOR CERTIFICATION

Certified sites: Lüdenscheid, DE*; Bornel, FR; Breteuil, FR; Suippes, FR

Our environmental commitment

At Lebronze alloys, our commitment to environmental responsibility is at the heart of how we operate and innovate. We are actively transforming our processes to reduce our impact on the planet while supporting a more sustainable industrial future.

Guided by internationally recognized frameworks and certifications, we have set ambitious, science-based targets to lower our emissions, preserve natural resources, and increase our use of recycled materials.

These commitments reflect both our long-term vision and our determination to contribute meaningfully to the global transition toward a low-carbon, circular economy.

-50%

Scope 1 & 2 emissions reduction between 2018 and 2030 (target 1,5°)

-25%

Reduction of scope 3 emission between 2021and 2030 (target 1,5°)

>80%

Over 80% of our raw metal comes from recycled sources

-50%

Reduction of water consumption of 50% between 2018 and 2025

GOLD | Top 5% ecovadis Sustainability Rating JAN 2026

Member of "Coq vert"

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

WE SUPPORT UN GLOBAL COMPACT

Performance materials for critical applications

lba lebronze alloys

CuZnNi alloys
Nickel-silver alloys
Formability and solderability

Our Group offers a comprehensive range of nickel silver alloys, primarily composed of copper, zinc, and nickel. These alloys stand out for their excellent deep-drawing formability and superior solderability, making them ideal for a wide variety of applications.

PRODUCT PORTFOLIO

Alloy	ISO	UNS	EN
Niclal® 120	CuNi12Zn24	C75700	CW403J
Niclal® 180	CuNi18Zn21	NA	CW409J
EnviN1	CuNi12Zn38Mn5	NA	NA
ENVN0701	CuNi7Zn42	NA	NA
NM2	CuNi7Zn39Pb3Mn2	NA	CW400J
NM436	CuNi12Zn38Mn5Pb2	NA	CW407J
Strong 400*	CuNi37Zn12	NA	NA

**For this alloy, technical data is on demand*

STANDARD CAPABILITY

	Rods	Wires
Diameter	1.50 – 10.00 mm*	1.20 – 10.00 mm*

**Depending on alloy. Dimensions outside this range on request*

ESG Performance

We aim to offer our Customers products with the leading grade of environmental footprint. To achieve this, we make major investments in innovative processes aiming to optimize energy and water consumption and increasing the use of recycled raw materials. More specifically, we have developed state-of-the-art recycling know-how based on specialized purchasers for sourcing end of life materials to be processed in our Group Upcycling Workshop. Another key aspect of our ESG strategy is to offer substitutes for alloys that are not REACH and RoHS compliant.

Our CuZnNi alloys are:
- In majority REACH and RoHS compliant
- Mainly produced from recycled raw materials

REACH compliant

RoHS compliant

Markets and applications

Luxury

- Watch micro-components
- Spectacle components
- Writing instruments

Electronics

- Contacts
- Connectors

Others

- Components for high safety locks

Niclal® 120

CuNi12Zn24

Cu copper | Zn zinc | Ni nickel

Niclal® 120 is a nickel-silver alloy which offers a good combination of properties, such as mechanical strength, good corrosion resistance, excellent machinability and good electrical resistivity. It also offer good formability and fair machinability.

Back

MATERIAL DESIGNATION

ISO	UNS	Others
CuNi12Zn24	C75700	CW403J, NF EN 1652 ASTM B151

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Ni	Zn
64%	12%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.7 g/cm^3
Thermal conductivity at 20 °C	33 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	16 x 10^{-6}/°C
Young's modulus	125 GPa
Electrical properties	
Resistivity at 20 °C	22.7 µΩ.cm

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.0 - 15.0 mm
Wires	1.0 - 15.0 mm

Dimensions outside these ranges on request

TYPICAL APPLICATIONS

Silverware
Watch components
Medals
Eyewear components
Pen tips
Lighters components
Electronic components
Lock industry components
Fittings

COMPATIBLE DOWNSTREAM PROCESS

Machining
Cold working
Deep drawing
Welding
Brazing
Stamping

KEY FEATURES

Mechanical strength
Corrosion resistance
Amagetism
Yellow-silver color

OTHER AVAILABLE FORMS

Strips and sheets

Niclal® 180

CuNi18Zn21

Cu copper | Zn zinc | Ni nickel

Niclal® 180 is a nickel-silver alloy which offers a good combination of properties, such as mechanical strength, good corrosion resistance, excellent machinability and good electrical resistivity. It also offer good formability and fair machinability.

Back

MATERIAL DESIGNATION

ISO	UNS	Others
CuNi18Zn21	NA	CW409J, NF EN 1652

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Ni	Zn
61%	18%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.7 g/cm^3
Thermal conductivity at 20 °C	23 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	17.7 x 10^{-6}/°C
Young's modulus	135 GPa
Electrical properties	
Resistivity at 20 °C	32 µΩ.cm

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.0 - 15.0 mm
Wires	1.0 - 15.0 mm

Dimensions outside these ranges on request

TYPICAL APPLICATIONS

Silverware
Watch components
Medals
Eyewear components
Pen tips
Lighters components
Electronic components
Lock industry components
Fittings

COMPATIBLE DOWNSTREAM PROCESS

Machining
Cold working
Deep drawing
Welding
Brazing
Stamping

KEY FEATURES

Mechanical strength
Corrosion resistance
Amagnetism
Silver color

OTHER AVAILABLE FORMS

Strips and sheets

Disclaimer : Data for information only, non-contractual

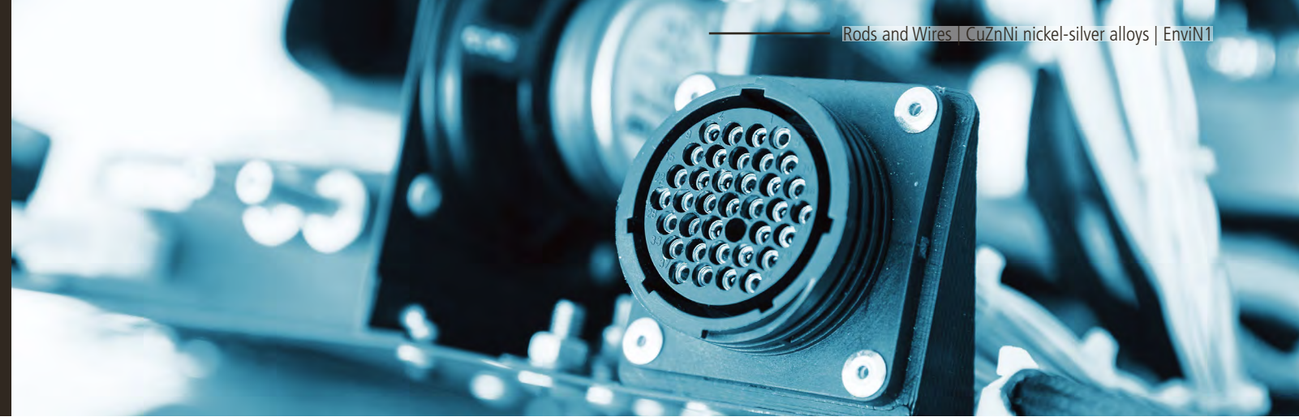
EnviN1

CuNi12Zn38Mn5

Cu copper | Zn zinc | Ni nickel | Mn manganese

EnviN1 is a premium lead-free nickel silver alloy that offers good corrosion resistance, excellent surface finish, and high cold formability. It is the material of choice for fiber optic connectors and high-security lock components, where precision and durability are essential.

Back



Rods and Wires | CuZnNi nickel-silver alloys | EnviN1

MATERIAL DESIGNATION

ISO	UNS	Others
CuNi12Zn38Mn5	NA	NA

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Ni	Mn	Pb	Zn
45 - 46%	11.8 - 12.7%	4.6 - 5.4%	< 0.01%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.3 g/cm^3
Thermal conductivity at 20 °C	20 W/m.°C
Coefficient of thermal expansion from 0 to 300 °C	19 x 10^{-6}/°C
Young's modulus	110 GPa
Melting point	920 °C
Electrical properties	
Electrical conductivity	5 %IACS

TYPICAL APPLICATIONS

Writing instruments
Components for fiber optic connectors
Components for high safety locks
Spare parts for eyeglasses

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding

KEY FEATURES

Good corrosion resistance (vinegar, industrial atmosphere, rural atmosphere, marine)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.0 - 16.0 mm
Wires	1.0 - 16.0 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%) A (100)
Other tempers on demand			
1	≥ 400	550 - 600	≥ 8%
2	≥ 500	600 - 700	≥ 5%
3	≥ 620	700 - 750	≥ 3%

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

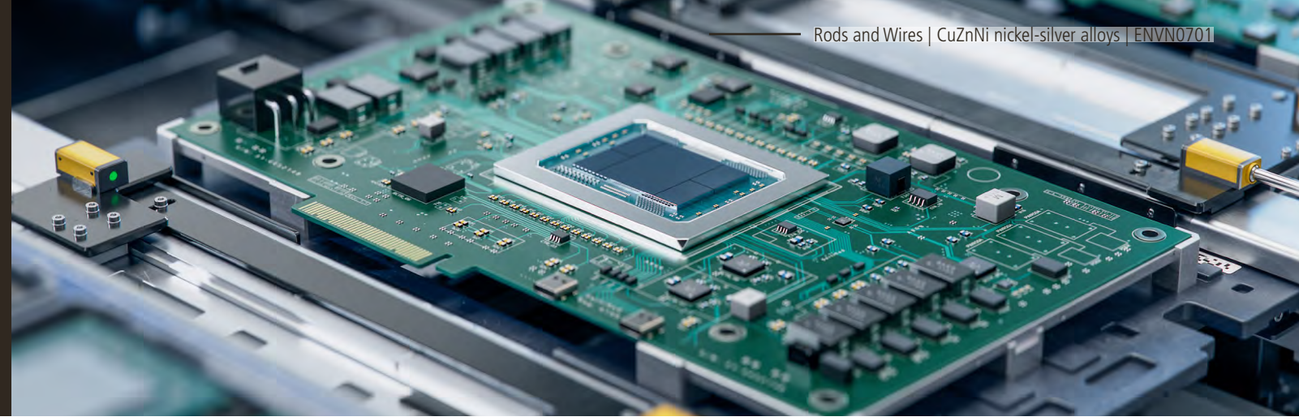
ENVN0701

CuNi7Zn42

Cu copper | Zn zinc | Ni nickel | Mn manganese

ENVN0701 is a versatile, lead-free copper alloy that balances good corrosion resistance with enhanced electrical conductivity. It is ideal for fiber optic connectors and fine mechanical components, where both electrical performance and dimensional stability are critical.

Back



Rods and Wires | CuZnNi nickel-silver alloys | ENVN0701

MATERIAL DESIGNATION

ISO	UNS	Others
CuNi7Zn42	NA	NA

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Ni	Mn	Pb	Zn
47.9 - 48.5%	6.8 - 7.4%	1.7 - 2.4%	0.09%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm^3
Thermal conductivity at 20 °C	31 W/m.°C
Coefficient of thermal expansion from 0 to 300 °C	19 x 10^{-6}/°C
Young's modulus	110 GPa
Melting point	920 °C
Electrical properties	
Electrical conductivity	7 %IACS

TYPICAL APPLICATIONS

Electronics industry

Other

Lock profiles

Fiber optic connectors

Fine mechanics

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Hot working

Soldering

Welding

KEY FEATURES

Good corrosion resistance (to stress corrosion, vinegar, industrial atmosphere, rural atmosphere, marine, fresh water)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.20 - 10.00 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%) A (5.65)	Hardness (HV)
Other tempers on demand				
R600	≥ 400	≥ 600	≥ 8%	
H150				≥ 150
R670		≥ 675	≥ 2%	≥ 180

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

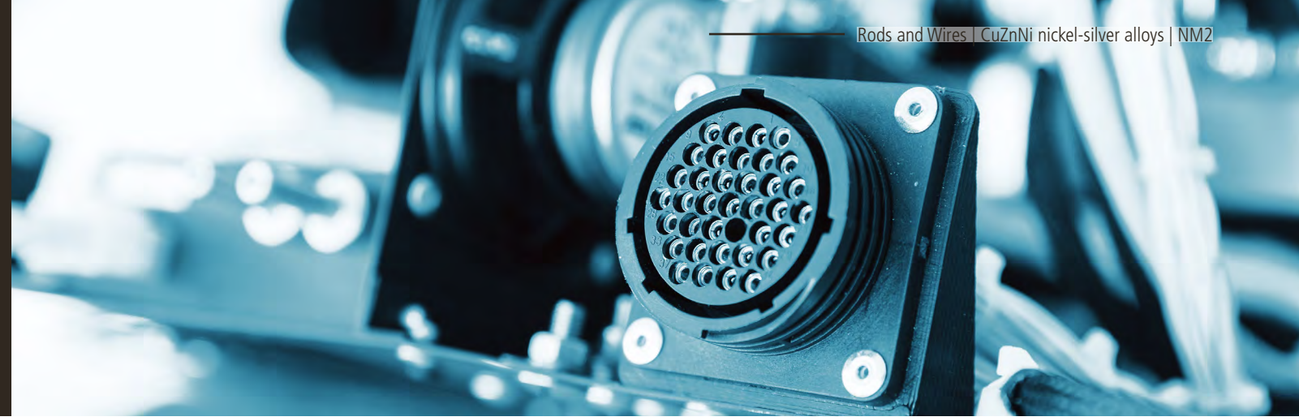
NM2

CuNi7Zn39Pb3Mn2

Cu copper · Zn zinc · Ni nickel · Pb Lead · Mn manganese

Back

NM2 is a high-performance free-machining alloy designed for precision turning applications. Its superior machinability and wear resistance make it perfect for fiber optic connectors and high-security lock components in demanding mechanical environments.



Rods and Wires | CuZnNi nickel-silver alloys | NM2

MATERIAL DESIGNATION

ISO	UNS	Others
CuNi7Zn39Pb3Mn2	NA	CW400J

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Ni	Mn	Pb	Zn
48.5 - 49.7%	6.9 - 7.6%	2.1 - 2.8%	2.4 - 3.0%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm^3
Thermal conductivity at 20 °C	31 W/m.°C
Coefficient of thermal expansion from 0 to 300 °C	19 x 10^{-6}/°C
Young's modulus	110 GPa
Melting point	920 °C
Electrical properties	
Electrical conductivity	7 %IACS

TYPICAL APPLICATIONS

Writing instruments
Components for fiber optic connectors
Components for high safety locks
Spare parts for eyeglasses

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding
Machining

KEY FEATURES

Good corrosion resistance (to stress corrosion, vinegar, industrial atmosphere, rural atmosphere, marine, fresh water)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.20 - 10.00 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%) A (5.65)	Hardness (HV)
Other tempers on demand				
R600	≥ 400	≥ 600	≥ 8%	
H150				≥ 150
R670		≥ 670	≥ 2%	≥ 180

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

NM436

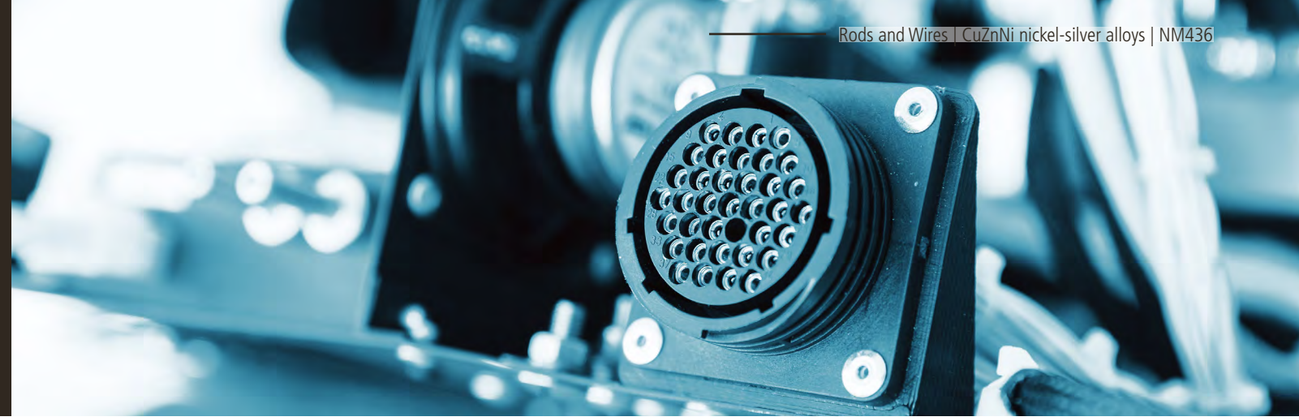
CuNi12Zn38Mn5Pb2

Cu copper · Zn zinc · Ni nickel · Mn manganese · Pb Lead

Back

NM436 is a robust nickel silver alloy combining high strength, excellent dimensional stability, and good friction behavior. It is perfectly suited for high-security locks and fiber optic connectors, where mechanical resilience and precision are paramount.

Rods and Wires | CuZnNi nickel-silver alloys | NM436



MATERIAL DESIGNATION

ISO	UNS	Others
CuNi12Zn38Mn5Pb2	NA	CW407J

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Ni	Mn	Pb	Zn
42 - 45%	10.5 - 13.0%	5 - 7%	1 - 2%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.3 g/cm^3
Thermal conductivity at 20 °C	20 W/m.°C
Coefficient of thermal expansion from 0 to 300 °C	20 x 10^{-6}/°C
Young's modulus	110 GPa
Melting point	920 °C
Electrical properties	
Electrical conductivity	5 %IACS

TYPICAL APPLICATIONS

Writing instruments
Components for fiber optic connectors
Components for high safety locks
Spare parts for eyeglasses

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding

KEY FEATURES

Good corrosion resistance (to industrial atmosphere, rural atmosphere, marine, fresh water, alkaline and neutral salt solutions)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.20 - 10.00 mm

Dimensions outside these ranges on request

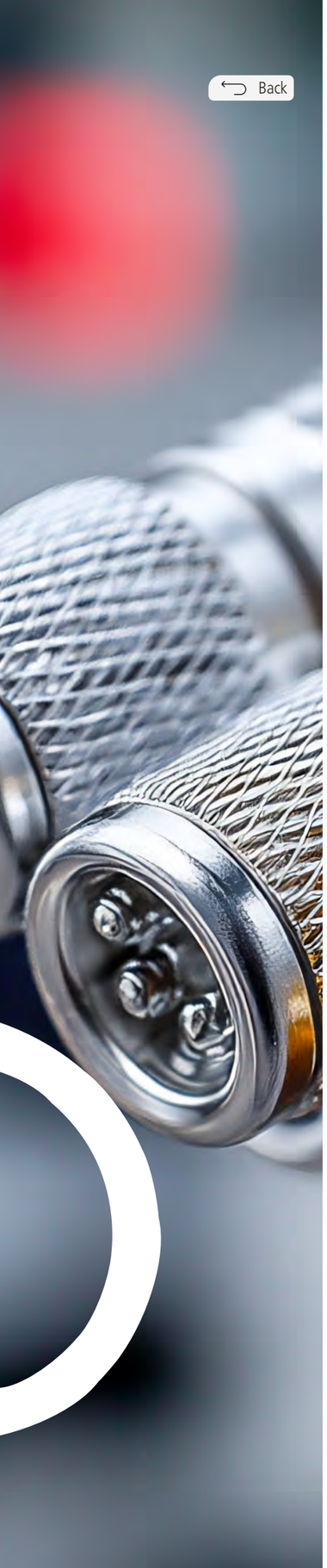
MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%) A (5.65)	Hardness (HV)
Other tempers on demand				
R600	≥ 400	≥ 600	≥ 8%	
H150				≥ 150
R690		≥ 690	≥ 2%	≥ 180

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual



CuSn alloys
Tin bronzes
Strength and formability

Our Group offers a broad selection of tin bronzes, available in leaded versions for enhanced machinability or unleaded options for environmental compliance. Renowned for their high mechanical strength and outstanding formability, these alloys are widely used in electronics, particularly for connectors and contactors.

PRODUCT PORTFOLIO

Alloy	ISO	UNS	EN
BZ3	CuSn4	C51100	CW450K
BZ5	CuSn5	C51000	CW451K
BZ6	CuSn6	C51900	CW452K
BZ8	CuSn8	C52100	CW453K
BP5	CuSn5Pb1	C53400	CW458K
BZ4	CuSn4Pb4Zn4	C54400	CW456K
BZ4 ZeST®	Proprietary	Lead-free alternative to BZ4	

STANDARD CAPABILITY

	Rods	Wires
Diameter	1.50 – 10.00 mm*	1.00 – 10.00 mm*

**Depending on alloy. Dimensions outside this range on request*

ESG Performance

We aim to offer our Customers products with the leading grade of environmental footprint. To achieve this, we make major investments in innovative processes aiming to optimize energy and water consumption and increasing the use of recycled raw materials. More specifically, we have developed state-of-the-art recycling know-how based on specialized purchasers for sourcing end of life materials to be processed in our Group Upcycling Workshop. Another key aspect of our ESG strategy is to offer substitutes for alloys that are not REACH and RoHS compliant.

Our CuSn alloys are:
- In majority REACH and RoHS compliant
- Mainly produced from recycled raw materials

REACH compliant

RoHS compliant

Markets and applications

Electronics

- Connectors
- Contacts

Others

- Fasteners
- Springs
- High safety locks

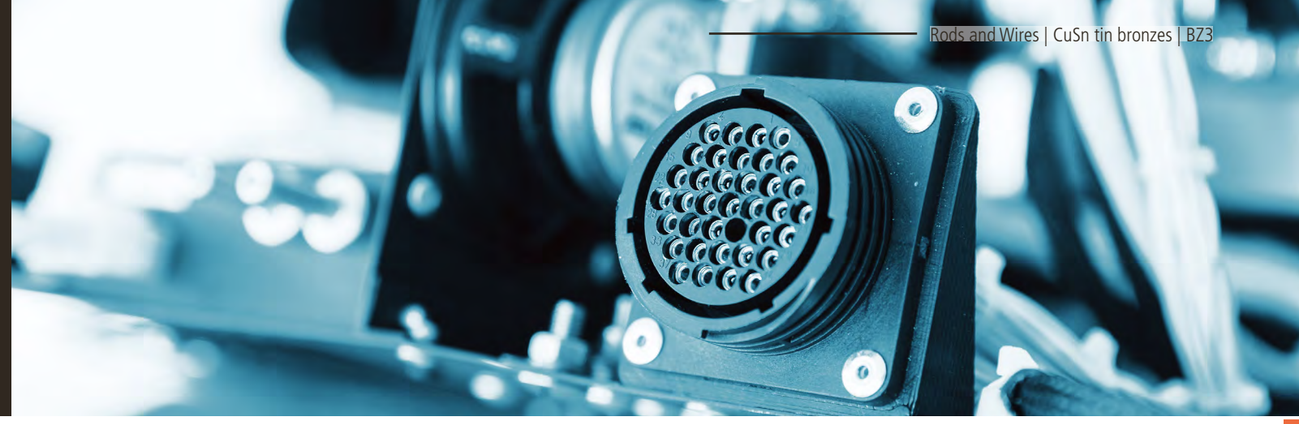
BZ3
CuSn4

Cu copper

Sn tin

Back

BZ3 is a lead-free bronze that combines high strength, good corrosion resistance, and excellent cold formability. It is widely used for connectors and springs, where both electrical performance and mechanical resilience are critical.



Rods and Wires | CuSn tin bronzes | BZ3

MATERIAL DESIGNATION

ISO	UNS	Others
CuSn4	C51100	CW450K

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Sn	P
Balance	3.5 - 4.5%	0.01 - 0.4%

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.9 g/cm^3
Thermal conductivity at 20 °C	90 W/m.°C
Coefficient of thermal expansion from 20 to 300 °C	17.1 x 10^{-6}/°C
Young's modulus	110 GPa
Melting point	1049 °C
Electrical properties	
Electrical conductivity	18 %IACS

TYPICAL APPLICATIONS

Screws
Springs
Wire mesh
Connectors

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding

KEY FEATURES

Good corrosion resistance (to stress corrosion industrial atmosphere, rural atmosphere, fresh water, marine)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.00 - 10.00 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)		Hardness (HV)
			A (11.3)	A (5.65)	
Other tempers on demand					
R320	140	≥ 320	≥ 50%	≥ 55%	≥ 80
R400	270	≥ 400	≥ 20%	≥ 25%	≥ 125
R470	360	≥ 470		≥ 8%	≥ 150
R560	490	≥ 560			≥ 175
R690	680	≥ 690			≥ 200

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

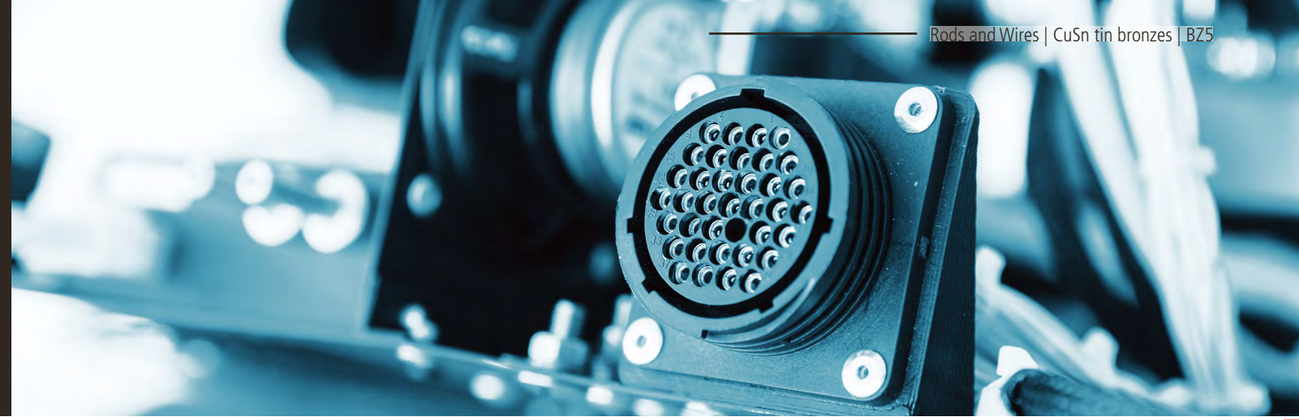
Disclaimer : Data for information only, non-contractual

BZ5
CuSn5

Cu copper | Sn tin

Back

BZ5 is a bronze offering a balanced mix of strength, electrical conductivity, and spring properties. It is widely used for spring contacts in electrical connectors and cold-worked parts, where both resilience and precision are essential.



Rods and Wires | CuSn tin bronzes | BZ5

MATERIAL DESIGNATION

ISO	UNS	Others
CuSn5	C51000	CW451K

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Sn	P
Balance	4.5 - 5.5%	0.01 - 0.4%

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.85 g/cm^3
Thermal conductivity at 20 °C	82 W/m.°C
Coefficient of thermal expansion from 20 to 300 °C	17.1 x 10^{-6}/°C
Young's modulus	110 GPa
Melting point	1049 °C
Electrical properties	
Electrical conductivity	20 %IACS

TYPICAL APPLICATIONS

Spring contacts for electrical connectors
Cold worked parts

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Soldering
Welding

KEY FEATURES

Good corrosion resistance (to stress corrosion industrial atmosphere, rural atmosphere, fresh water, marine)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.00 - 10.00 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)		Hardness (HV)
			A (11.3)	A (5.65)	
Other tempers on demand					
R320	140	≥ 320	≥ 50%	≥ 55%	≥ 80
R400	270	≥ 400	≥ 20%	≥ 25%	≥ 125
R470	360	≥ 470		≥ 8%	≥ 150
R560	490	≥ 560			≥ 175
R690	680	≥ 690			≥ 200

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

BZ6
CuSn6

29 63.546 Cu copper

50 118.71 Sn tin

Back

BZ6 is a bronze alloy offering high strength, good corrosion resistance, and stable electrical properties. It is widely used in the spring industry and the electrical and electronics sector, where durability and precision are essential.

Rods and Wires | CuSn tin bronzes | BZ6

MATERIAL DESIGNATION

ISO	UNS	Others
CuSn6	C51900	CW452K

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Sn	P
Balance	4.5 - 5.5%	0.01 - 0.4%

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.8 g/cm³
Thermal conductivity at 20 °C	75 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	18.5 x 10^{-6}/°C
Young's modulus	118 GPa
Melting point	1040 °C
Electrical properties	
Electrical conductivity	18 %IACS

TYPICAL APPLICATIONS

Electrical and electronics industry

Spring and Lock industry

Fasteners (screws and rivets)

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Soldering

Welding

KEY FEATURES

Good corrosion resistance (to stress corrosion industrial atmosphere, rural atmosphere, fresh water, marine)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.00 - 10.00 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R340	≤ 270	≥ 340	≥ 35%	≥ 40%	≥ 45%	
H080						80 - 110
R420	≥ 220	≥ 420		≥ 25%	≥ 30%	
H120						120 - 155
R520	≥ 400	≥ 520		≥ 4%	≥ 5%	
H150						150 - 180
R700	≥ 600	≥ 700				
H180						180 - 215

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

BZ8
CuSn8

Cu copper | Sn tin

Back

BZ8 is a high-tin bronze offering superior strength and excellent spring properties. It is widely used in the spring industry and the electrical and electronics sector, where high resilience and reliable conductivity are essential.

Rods and Wires | CuSn tin bronzes | BZ8

MATERIAL DESIGNATION

ISO	UNS	Others
CuSn8	C52100	CW453K

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Sn	P
Balance	7.5 - 8.5%	0.01 - 0.4%

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.8 g/cm³
Thermal conductivity at 20 °C	67 W/m.°C
Coefficient of thermal expansion from 20 to 300 °C	17.4 x 10^{-6}/°C
Young's modulus	110 GPa
Melting point	1027 °C
Electrical properties	
Electrical conductivity	12 %IACS

TYPICAL APPLICATIONS

Electrical and electronics industry

Spring and Lock industry

Fasteners (screws and rivets)

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Soldering

Welding

KEY FEATURES

Good corrosion resistance (to stress corrosion industrial atmosphere, rural atmosphere, fresh water, marine)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.00 - 10.00 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R390	≤ 280	≥ 390	≥ 35%	≥ 40%	≥ 45%	
H085						85 - 125
R450	≥ 280	≥ 450	≥ 18%	≥ 22%	≥ 26%	
H135						135 - 165
R550	≥ 400	≥ 550	≥ 10%	≥ 12%	≥ 15%	
H160						160 - 190
R620	≥ 500	≥ 620	≥ 5%	≥ 8%		
H180						≥ 180
R750	≥ 680	≥ 750				
H210						≥ 210

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

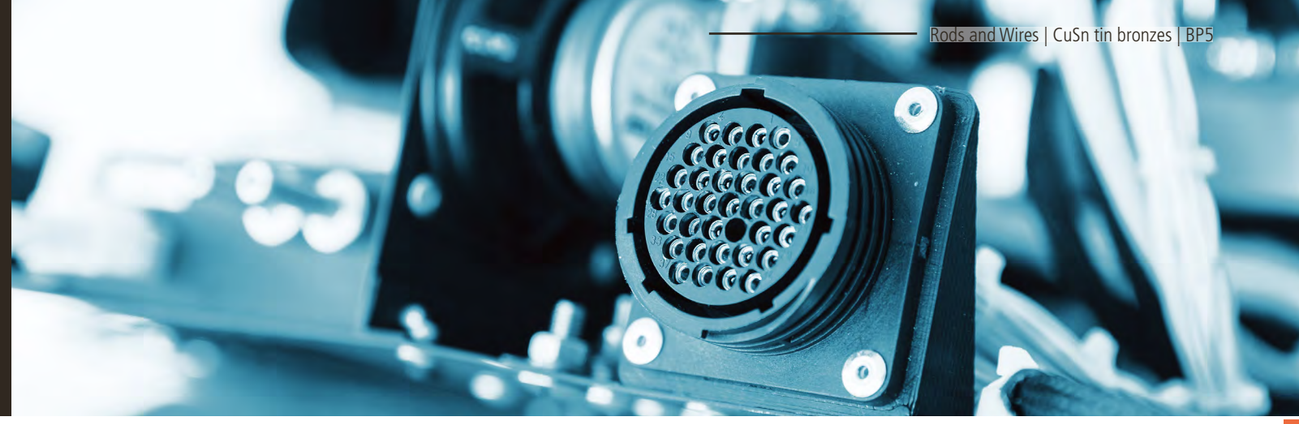
BP5

CuSn5Pb1

29	50	82
63.546	118.71	207.200
Cu	Sn	Pb
copper	tin	Lead

Back

BP5 is a bronze alloy with added lead for improved machinability and wear resistance. It is widely used for spring contacts in electrical connectors and components for safety locks, where both durability and precision are critical.



Rods and Wires | CuSn tin bronzes | BP5

MATERIAL DESIGNATION

ISO	UNS	Others
CuSn5Pb1	C53400	CW458K

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Sn	Pb
Balance	3-5 - 4.5%	0.5 - 1.5%

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.86 g/cm^3
Thermal conductivity at 20 °C	85 W/m.°C
Coefficient of thermal expansion from 20 to 300 °C	17.1 x 10^{-6}/°C
Young's modulus	110 GPa
Melting point	1049 °C
Electrical properties	
Electrical conductivity	18 %IACS

TYPICAL APPLICATIONS

Spring contacts for electrical connectors
Components for safety locks

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Soldering
Welding

KEY FEATURES

Good corrosion resistance (to stress corrosion, industrial atmosphere, rural atmosphere, marine, fresh water)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.00 - 10.00 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R450	350	≥ 450	≥ 6%	≥ 8%	≥ 10%	≥ 150
R550	500	≥ 550	≥ 3%	≥ 5%		≥ 180
R640	580	≥ 640				≥ 200
R720	680	≥ 720				≥ 210

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

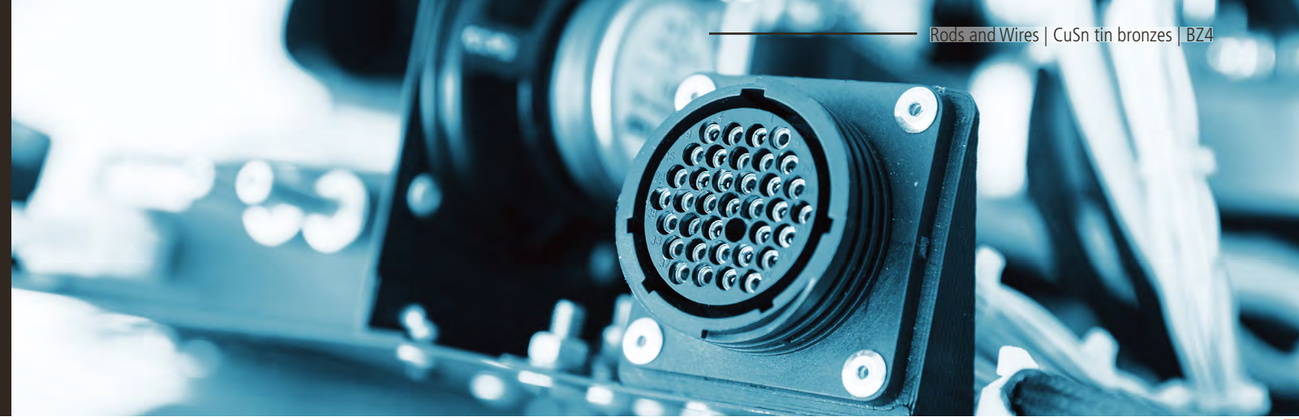
BZ4

CuSn4Pb4Zn4

Cu	Sn	Pb	Zn
copper	tin	Lead	zinc

BZ4 is a multi-alloy bronze combining tin, lead, and zinc for high strength, excellent wear resistance, and good machinability. It is widely used for spring contacts in electrical connectors and cold-worked parts, where durability and precision are essential.

Back



Rods and Wires | CuSn tin bronzes | BZ4

MATERIAL DESIGNATION

ISO	UNS	Others
CuSn4Pb4Zn4	C54400	CW456K

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Sn	Zn	Pb	P
Balance	3-5 - 4.5%	3-5 - 4.5%	3.5 - 4.0%	0.01 - 0.4%

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.8 g/cm^3
Thermal conductivity at 20 °C	80 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	16.6 x 10^{-6}/°C
Young's modulus	103 GPa
Melting point	999 °C
Electrical properties	
Electrical conductivity	19 %IACS

TYPICAL APPLICATIONS

Spring contacts for electrical connectors
Cold worked parts

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Soldering
Welding

KEY FEATURES

Good corrosion resistance (to stress corrosion, industrial atmosphere, rural atmosphere, marine, fresh water)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.00 - 10.00 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R450	350	≥ 450	≥ 6%	≥ 8%	≥ 10%	≥ 150
R550	500	≥ 550	≥ 3%	≥ 5%		≥ 180
R640	580	≥ 640				≥ 200
R720	680	≥ 720				≥ 210

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

BZ4 ZeST®

CuSn4Zn4

29 63.546	50 118.71	30 65.38
Cu copper	Sn tin	Zn zinc

Back

BZ4 ZeST® is a copper-tin-zinc alloy designed and produced by Lebronze alloys. This lead-free alloy exhibits an excellent machinability (comparable to leaded alloys), high mechanical properties and resistance to stress corrosion cracking.

MATERIAL DESIGNATION

ISO	UNS	Others
CuSn4Zn4	NA	NA

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Sn	Zn	Pb
Balance	4%	4%	< 0.1%

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.9 g/cm^3
Thermal conductivity at 20 °C	67 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	17.3 x 10^{-6}/°C
Melting point	900 °C
Electrical properties	
Electrical conductivity	17 %IACS
Electrical resistivity at 20°C	10 µΩ.cm

TYPICAL APPLICATIONS

Connectors
Bearing
Friction parts

COMPATIBLE DOWNSTREAM PROCESS

Machining
Turning
Drilling
Plating

KEY FEATURES

Excellent machinability
High mechanical properties
Lead-free

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.0 - 13.0 mm
Wires	1.0 - 13.0 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)	Hardness (HV)
¾ hard H14	> 550	> 650	< 10%	> 200
Other tempers on demand				

We also produce copper and nickel alloy strips and sheets.

To know more, visit:
www.lebronze-alloys.com

Special CuZn alloys
Special brasses
Durability and versatility

Our special brass range combines copper and zinc with tailored additions to deliver specific performance benefits. These alloys are perfect for brazing joints, bushings, and bearings, thanks to their exceptional durability and versatility.

PRODUCT PORTFOLIO

Alloy	ISO	UNS	EN
SML60	CuZn40MnSi	NA	CF726R
SML61	CuZn39Mn1SiSn	NA	CF728R
SMBKM	CuZn35Ni3Mn2AlPb	NA	CW710R
SM58	CuZn37Mn3Al2PbSi	NA	CW713R

STANDARD CAPABILITY

	Rods	Wires
Diameter	1.50 – 10.00 mm*	1.00 – 10.00 mm*

**Depending on alloy. Dimensions outside this range on request*

ESG Performance

We aim to offer our Customers products with the leading grade of environmental footprint. To achieve this, we make major investments in innovative processes aiming to optimize energy and water consumption and increasing the use of recycled raw materials. More specifically, we have developed state-of-the-art recycling know-how based on specialized purchasers for sourcing end of life materials to be processed in our Group Upcycling Workshop. Another key aspect of our ESG strategy is to offer substitutes for alloys that are not REACH and RoHS compliant.

Our special CuZn alloys are:
- In majority REACH and RoHS compliant
- Mainly produced from recycled raw materials

REACH compliant

RoHS compliant

Markets and applications

Others

- Brazing
- Bushings and bearings
- Mechanical components

SML60

CuZn40MnSi

Cu copper | Zn zinc | Mn manganese | Si silicon

Back

SML60 is a special brass alloy offering excellent hot workability, high strength, and reliable brazing performance. It is widely used for gap and joint brazing of steels and nickel alloys and for thick-walled copper parts, where thermal stability and joint integrity are critical.

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn40MnSi	NA	CF726R

TYPICAL APPLICATIONS

Filler metal for copper-zinc alloys.

Gap and joint brazing for unalloyed and low-alloy steels, malleable cast iron, nickel and nickel alloys as well as for copper alloys with a solidus temperature > 950°C (nickel silver) and copper.

Thick-walled copper parts.

Joint brazing without high strength claim.

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Mn	Si	Zn
60%	1%	0.25%	Balance

COMPATIBLE DOWNSTREAM PROCESS

Brazing

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm^3
Melting point	1050 °C

KEY FEATURES

Brazing ability

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.00 - 10.00 mm

Dimensions outside these ranges on request

SML61

CuZn39Mn1SiSn

Cu copper | Zn zinc | Mn manganese | Si silicon | Sn tin

Back

SML61 combines good hot forming properties with strong brazing capability and solid mechanical strength. It is commonly applied in brazing of copper alloys and assembly of low-alloy steels, ensuring durability and metallurgical compatibility.

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn39Mn1SiSn	NA	CF728R

TYPICAL APPLICATIONS

Filler metal for copper alloys

Gap and joint brazing for unalloyed and low-alloyed steels, malleable cast iron as well as nickel and nickel alloys.

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Mn	Si	Sn	Zn
60%	1%	0.25%	0.35%	Balance

COMPATIBLE DOWNSTREAM PROCESS

Brazing

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm^3
Melting point	1050 °C

KEY FEATURES

Resistant to overheating

Good fluidity

Good wetting

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.00 - 10.00 mm

Dimensions outside these ranges on request

Disclaimer : Data for information only, non-contractual

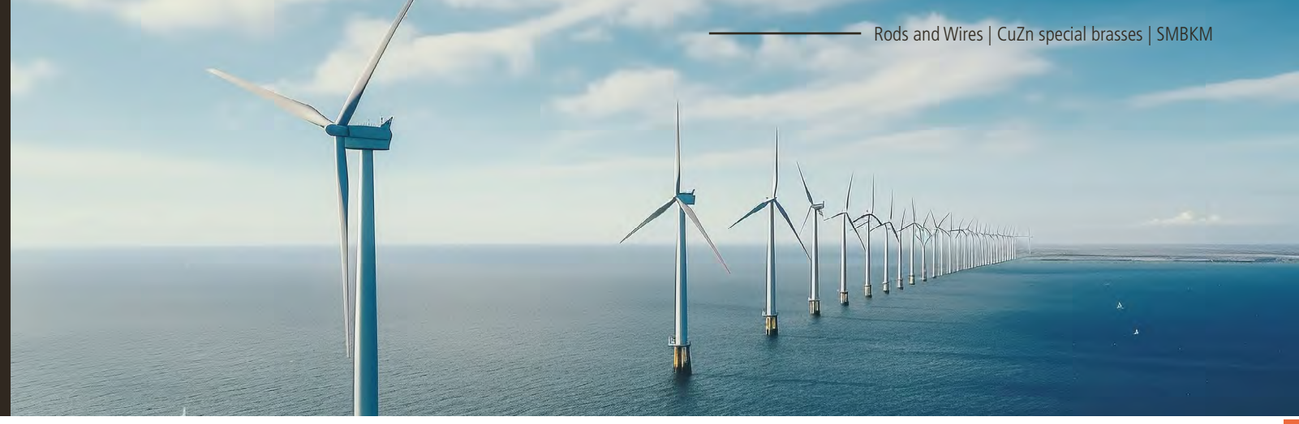
SMBKM

CuZn35Ni3Mn2AlPb

Cu copper · Zn zinc · Ni nickel · Mn manganese · Al aluminum · Pb Lead

Back

SMBKM delivers high mechanical strength, excellent corrosion resistance, and good thermal stability for demanding environments. It is widely used in power plant construction and shipbuilding, where reliability under stress and aggressive conditions is essential.



Rods and Wires | CuZn special brasses | SMBKM

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn35Ni3Mn2AlPb	NA	CW710R

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Ni	Mn	Al	Pb	Zn
59%	2.5%	2%	0.7%	0.6%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.3 g/cm^3
Thermal conductivity at 20 °C	50 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.7 x 10^{-6}/°C
Young's modulus	93 GPa
Melting point	900 °C
Electrical properties	
Electrical conductivity	10 %IACS

TYPICAL APPLICATIONS

Energy industry

Power plant construction

Others

Mechanical and Equipment Engineering

Shipbuilding

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Hot working

Soldering

Welding

KEY FEATURES

Corrosion resistant (freshwater and seawater, land atmosphere, sea atmosphere, industrial atmosphere)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.00 - 10.00 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%) A (5.65)	Hardness (HV)
Other tempers on demand				
R440	≥ 200	≥ 440	≥ 12%	
H110				≥ 115

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

SM58

CuZn37Mn3Al2PbSi

SM58 is a special brass produced by Lebronze alloys. It is used in a variety of applications: mechanical engineering, friction bearings, and many others. SM58 exhibits good resistance to corrosion.

Cu copper · Zn zinc · Mn manganese · Al aluminum · Si silicon · Pb Lead

Back

Rods and Wires | CuZn special brasses | SM58

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn37Mn3Al2PbSi	NA	CW713R

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Mn	Al	Si	Pb	Zn
58%	2.25%	1.8%	1.5%	0.5%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.1 g/cm^3
Thermal conductivity at 20 °C	63 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.4 x 10^{-6}/°C
Young's modulus	93 GPa
Melting point	910 °C
Electrical properties	
Electrical conductivity	13 %IACS

TYPICAL APPLICATIONS

Mechanical engineering
Friction bearings (good resistance to wear)
Valves
Hot pressed parts

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding

KEY FEATURES

Corrosion resistant (organic substances, alkaline compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 10.00 mm
Wires	1.00 - 10.00 mm

Dimensions outside these ranges on request

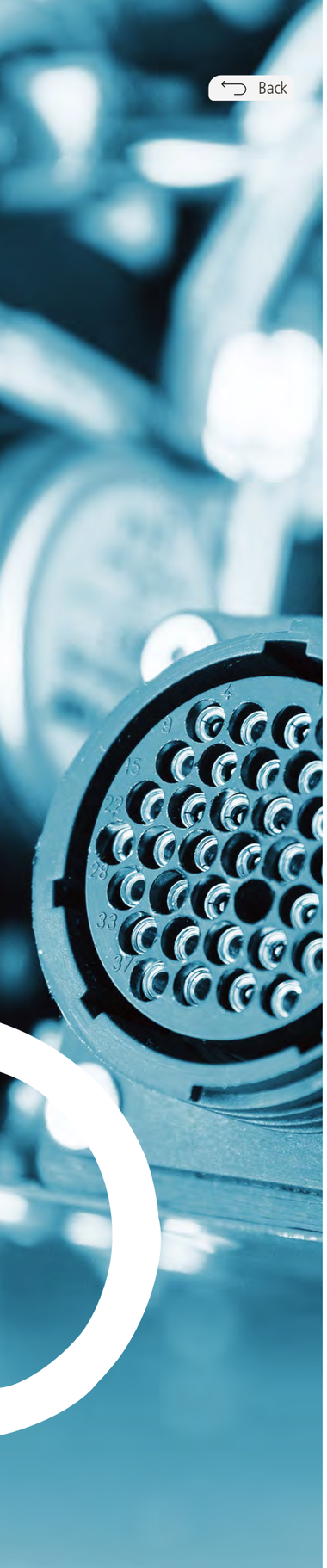
MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%) A (5.65)	Hardness (HV)
Other tempers on demand				
R540	≥ 250	≥ 540	≥ 10%	
H130				≥ 130

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual



Back

Machinable CuZn alloys
Machinable unleaded brasses
Machinability and sustainability

Designed to replace standard brasses in demanding applications, our machinable unleaded brasses offer optimized machinability and sustainability. They are particularly valued in electronics (connectors) and luxury components, where precision and reliability are essential.

PRODUCT PORTFOLIO

Alloy	ISO	UNS	EN
EnviB1	CuZn40	NA	CW509L
EnviB10	CuZn40	NA	CW509L
EA	CuZn40	C28000	CW509L
Z40	CuZn40	C28000	CW509L
EnviB10AM	CuZn40 - antimagnetic	C28000	CW509L
EnviB58	CuZn42	NA	CW510L
EnviB158	CuZn42	NA	CW510L
Z42	CuZn42	C28500	CW510L
S42	CuZn42	C28500	CW510L
EnviBEco	CuZn21Si3P	C69300	CW724R

STANDARD CAPABILITY

	Rods	Wires
Diameter	1.50 – 14.00 mm*	1.00 – 11.50 mm*

**Depending on alloy. Dimensions outside this range on request*

ESG Performance

We aim to offer our Customers products with the leading grade of environmental footprint. To achieve this, we make major investments in innovative processes aiming to optimize energy and water consumption and increasing the use of recycled raw materials. More specifically, we have developed state-of-the-art recycling know-how based on specialized purchasers for sourcing end of life materials to be processed in our Group Upcycling Workshop. Another key aspect of our ESG strategy is to offer substitutes for alloys that are not REACH and RoHS compliant.

Our machinable CuZn alloys are:
- Ideal substitutes to standard brasses
- REACH and RoHS compliant
- Mainly produced from recycled raw materials

REACH compliant

RoHS compliant

Markets and applications

Electronics

- Connectors

Luxury

- Leather goods
- Jewelry
- Watchmaking

EnviB1

CuZn40

29 63.546 Cu copper

30 65.38 Zn zinc

Back

EnviB1 with 0.2% Fe provides enhanced mechanical strength and improved thermal stability while maintaining good machinability. It is ideal for high-precision optical components and electronic parts exposed to thermal stress, where durability and reliability are critical.

Rods and Wires | CuZn machinable unleaded brasses | EnviB1

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn40	NA	CW509L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Fe	Pb	Zn
60%	0.2%	< 0.009%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm^3
Thermal conductivity at 20 °C	117 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.3 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	910 - 925 °C
Electrical properties	
Electrical conductivity	> 26 %IACS

TYPICAL APPLICATIONS

Optical Industry

Electronics Industry

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Hot working

Flash welding

Machining

KEY FEATURES

Good corrosion resistance (resistant to atmospheric conditions, neutral and alkaline salt solutions, organic compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 14.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R410	220	≥ 410	≥ 8%	≥ 10%	≥ 12%	
H100						100 - 160
R500	350	≥ 500	≥ 5%	≥ 8%	≥ 10%	
H130						≥ 130
R550	400	≥ 550	≥ 3%	≥ 5%		
H160						≥ 160

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

EnviB10

CuZn40

29 63.546 Cu copper

30 65.38 Zn zinc

Back

EnviB10 is a machinable brass alloy offering good hot formability, high strength, and reliable brazing performance. It is widely used in the optical industry and electronics industry, where precision and dimensional stability are essential.

Rods and Wires | CuZn machinable unleaded brasses | EnviB10

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn40	NA	CW509L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
60%	< 0.09%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm³
Thermal conductivity at 20 °C	117 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.3 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	910 - 925 °C
Electrical properties	
Electrical conductivity	> 26 %IACS

TYPICAL APPLICATIONS

Optical Industry
Electronics Industry

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Flash welding
Machining

KEY FEATURES

Good corrosion resistance (resistant to atmospheric conditions, neutral and alkaline salt solutions, organic compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 14.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R410	220	≥ 410	≥ 8%	≥ 10%	≥ 12%	
H100						100 - 160
R500	350	≥ 500	≥ 5%	≥ 8%	≥ 10%	
H130						≥ 130
R550	400	≥ 550	≥ 3%	≥ 5%		
H160						≥ 160

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

EA
CuZn40

Cu copper | Zn zinc

Back

EA is a lead-free brass with good forging and machining properties. EA contains less than 80 ppm of lead.

Rods and Wires | CuZn machinable unleaded brasses | EA

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn40	C28000	BS 2872, BS 2874, CW509L, DIN 17660, NFA 51-104

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
60%	< 0.008%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm^3
Thermal conductivity at 20 °C	121 W/m.°C
Coefficient of thermal expansion from 20 to 300 °C	21 x 10^{-6}/°C
Young's modulus	103 GPa
Thermal capacity	376 J/Kg.K
Electrical properties	
Electrical conductivity	28 %IACS

TYPICAL APPLICATIONS

Automotive and Luxury industries

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding
Machining

KEY FEATURES

Good machinability
Good corrosion resistance

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	6.0 - 80.0 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Size	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)	Hardness (HB)
Other tempers on demand					
R360	6 ≤ Ø ≤ 80 mm	≤ 300	≥ 360	≥ 20%	
H070					70 - 100
R410	6 ≤ Ø ≤ 40 mm	≥ 230	≥ 410	≥ 12%	
H100					100 - 145
R500	6 ≤ Ø ≤ 14 mm	≥ 350	≥ 500	≥ 8%	
H120					≥ 120

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

Z40
CuZn40

Cu copper | Zn zinc

Back

Z40 is a lead-free brass, suitable for bar turning and die forging. Z40 is used to make parts in several major sectors such as defense, automotive, etc.

Rods and Wires | CuZn machinable unleaded brasses | Z40

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn40	C28000	BS 2872, BS 2874, CW509L, DIN 17660, NFA 51-104

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
60%	< 0.1%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm^3
Thermal conductivity at 20 °C	376 W/m.°C
Coefficient of thermal expansion from 20 to 300 °C	21 x 10^{-6}/°C
Young's modulus	103 GPa
Thermal capacity	376 J/Kg.K
Electrical properties	
Electrical conductivity	28 %IACS

TYPICAL APPLICATIONS

Automotive
Defense
Luxury industries

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding
Machining

KEY FEATURES

Good corrosion resistance

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	6.0 - 80.0 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Size	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)	Hardness (HB)
Other tempers on demand					
R360	6 ≤ Ø ≤ 80 mm	≥ 300	≥ 360	≥ 20%	
H070					70 - 100
R410	6 ≤ Ø ≤ 40 mm	≥ 230	≥ 410	≥ 12%	
H100					100 - 145
R500	6 ≤ Ø ≤ 14 mm	≥ 350	≥ 500	≥ 8%	
H120					≥ 120

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

EnviB10AM

CuZn40

29 63.546 Cu copper

30 65.38 Zn zinc

Back

EnviB10AM is a special brass grade with extremely low iron content, ensuring non-magnetic properties and excellent dimensional stability. It is widely used in optical instruments and sensitive electronic devices, where magnetic neutrality and precision are crucial.

Rods and Wires | CuZn machinable unleaded brasses | EnviB10AM

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn40	C28000	CW509L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Fe	Zn
60%	< 0.09%	< 0.007%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm³
Thermal conductivity at 20 °C	117 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.3 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	910 - 925 °C
Electrical properties	
Electrical conductivity	> 26 %IACS

TYPICAL APPLICATIONS

Optical Industry

Electronics Industry

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Hot working

Flash welding

Machining

KEY FEATURES

Good corrosion resistance (resistant to atmospheric conditions, neutral and alkaline salt solutions, organic compounds)

Non-magnetic

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 14.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R410	220	≥ 410	≥ 8%	≥ 10%	≥ 12%	
H100						100 - 160
R500	350	≥ 500	≥ 5%	≥ 8%	≥ 10%	
H130						≥ 130
R550	400	≥ 550	≥ 3%	≥ 5%		
H160						≥ 160

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

EnviB58

CuZn42

29 63.546 Cu copper

30 65.38 Zn zinc

Back

EnviB58 is a machinable brass alloy offering good hot formability, solid mechanical strength, and reliable brazing performance. It is widely used in the optical industry and electronics sector, where precision and durability are essential.

Rods and Wires | CuZn machinable unleaded brasses | EnviB58

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn42	NA	CW510L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
58%	< 0.1%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm³
Thermal conductivity at 20 °C	113 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.3 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	910 - 925 °C
Electrical properties	
Electrical conductivity	> 25 %IACS

TYPICAL APPLICATIONS

Optical Industry

Electronics Industry

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Flash welding
Machining

KEY FEATURES

Good corrosion resistance (resistant to atmospheric conditions, neutral and alkaline salt solutions, organic compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 14.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R430	220	≥ 430	≥ 6%	≥ 8%	≥ 10%	
H110						≥ 110
R500	350	≥ 500	≥ 5%	≥ 8%		
H145						≥ 145
R550	400	≥ 550	≥ 2%	≥ 5%		
H165						≥ 165

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

EnviB158

CuZn42

29 63.546 Cu copper

30 65.38 Zn zinc

Back

EnviB158 ultra-low lead version ensures excellent machinability, high dimensional stability, and full compliance with environmental standards. It is ideal for high-precision optical components and sensitive electronic devices, where purity and reliability are critical.

Rods and Wires | CuZn machinable unleaded brasses | EnviB158

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn42	NA	CW510L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
58%	< 0.009%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm³
Thermal conductivity at 20 °C	113 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	217 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	910 - 925 °C
Electrical properties	
Electrical conductivity	> 25 %IACS

TYPICAL APPLICATIONS

Optical Industry
Electronics Industry
Luxury applications

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Flash welding
Machining

KEY FEATURES

Good corrosion resistance (resistant to atmospheric conditions, neutral and alkaline salt solutions, organic compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 14.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R430	220	≥ 430	≥ 6%	≥ 8%	≥ 10%	
H110						≥ 110
R500	350	≥ 500	≥ 5%	≥ 8%		
H145						≥ 145
R550	400	≥ 550	≥ 2%	≥ 5%		
H165						≥ 165

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

Z42
CuZn42

29 63.546 Cu copper
30 65.38 Zn zinc

Back

Z42 is a lead-free brass with a lead content of < 80 ppm that is nevertheless suitable for machining due to its α+β biphasic structure. Z42 is mostly used for luxury, jewelry and watchmaking applications.

Rods and Wires | CuZn machinable unleaded brasses | Z42

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn42	C28500	CW510L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
58%	< 0.008%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.37 g/cm^3
Thermal conductivity at 20 °C	139 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	21.7 x 10^{-6}/°C
Young's modulus	105 Gpa
Thermal capacity	375 J/Kg.K
Electrical properties	
Electrical conductivity	31 %IACS

TYPICAL APPLICATIONS

Luxury goods
Leather goods
Jewelry
Watchmaking industries

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding
Machining

KEY FEATURES

Good machinability
Good corrosion resistance

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	5.0 - 80.0 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Size	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)	Hardness (HB)
Other tempers on demand					
R360	6 ≤ Ø ≤ 80 mm	≥ 320	≥ 360	≥ 20%	
H090					90 - 125
R430	6 ≤ Ø ≤ 40 mm	≥ 220	≥ 430	≥ 12%	
H110					110 - 160
R500	6 ≤ Ø ≤ 14 mm	≥ 350	≥ 500	≥ 8%	
H135					≥ 135

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

S42
CuZn42

Cu copper | Zn zinc

Back

S42 is a lead-free brass that can replace standard brasses for bar turning. The good machinability of S42 is ensured by its α+β two-phase structure.

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn42	C28500	CW510L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
58%	< 0.1%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.37 g/cm^3
Thermal conductivity at 20 °C	139 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	21.7 x 10^{-6}/°C
Young's modulus	105 Gpa
Thermal capacity	375 J/Kg.K
Electrical properties	
Electrical conductivity	31 %IACS

TYPICAL APPLICATIONS

Optical Industry
Electronics Industry

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding
Machining

KEY FEATURES

Good machinability
Good corrosion resistance

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	5.0 - 80.0 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Size	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)	Hardness (HB)
Other tempers on demand					
R360	6 ≤ Ø ≤ 80 mm	≥ 320	≥ 360	≥ 20%	
H090					90 - 125
R430	6 ≤ Ø ≤ 40 mm	≥ 220	≥ 430	≥ 10%	
H110					110 - 160
R500	6 ≤ Ø ≤ 14 mm	≥ 350	≥ 500	≥ 5%	
H135					≥ 135

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

EnviB ECO

CuZn21Si3P

Cu copper | Si silicon | Zn zinc

Back

EnviB Eco is a high-performance silicon brass offering superior corrosion resistance, good wear properties, and excellent machinability. It is widely used in luxury watchmaking and electrical components, where durability and aesthetic precision are crucial.

Rods and Wires | CuZn machinable unleaded brasses | EnviB ECO

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn21Si3P	C69300	CW724R

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Si	Pb	Zn
75%	3%	< 0.1%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.3 g/cm³
Thermal conductivity at 20 °C	33 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	19.5 x10⁻⁶/°C
Young's modulus	90 GPa
Melting point	860 - 925 °C
Electrical properties	
Electrical conductivity	8 %IACS

TYPICAL APPLICATIONS

Luxury
Watchmaking
Electrical industries
Turned parts
Optical industry
Sanitary industry

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Machining

KEY FEATURES

Resistant to stress corrosion (cracking and dezincification)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 14.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R500		≥ 500	≥ 12%	≥ 13%	≥ 15%	
H110						110 - 170
R600	300	≥ 600	≥ 10%	≥ 11%		
H130						130 - 190
R670	400	≥ 670	≥ 8%	≥ 9%		
H160						160 - 220

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

CuZn alloys
Unleaded brasses
Formability and durability

Our unleaded brass range meets the requirements of luxury, defense, and mechanical engineering sectors. These alloys are appreciated for their excellent formability, long-term reliability, and high durability.

PRODUCT PORTFOLIO

Alloy	ISO	UNS	EN
E63S	CuZn37	C27200	CW508L
E63FS	CuZn36	C27200	CW507L
E70	CuZn30	C26000	CW505L
E80	CuZn20	C24000	CW503L
E85	CuZn15	C23000	CW502L
E90E	CuZn10	C22000	CW501L
E95	CuZn5	C21000	CW500L

STANDARD CAPABILITY

	Rods	Wires
Diameter	1.50 – 12.00 mm*	1.00 – 11.50 mm*

**Depending on alloy. Dimensions outside this range on request*

ESG Performance

We aim to offer our Customers products with the leading grade of environmental footprint. To achieve this, we make major investments in innovative processes aiming to optimize energy and water consumption and increasing the use of recycled raw materials. More specifically, we have developed state-of-the-art recycling know-how based on specialized purchasers for sourcing end of life materials to be processed in our Group Upcycling Workshop. Another key aspect of our ESG strategy is to offer substitutes for alloys that are not REACH and RoHS compliant.

Our CuZn alloys are:
- REACH and RoHS compliant
- Mainly produced from recycled raw materials

REACH compliant

RoHS compliant

Markets and applications

Luxury

- Leather goods
- Jewelry
- Watchmaking

Defence

- Ammunitions

Others

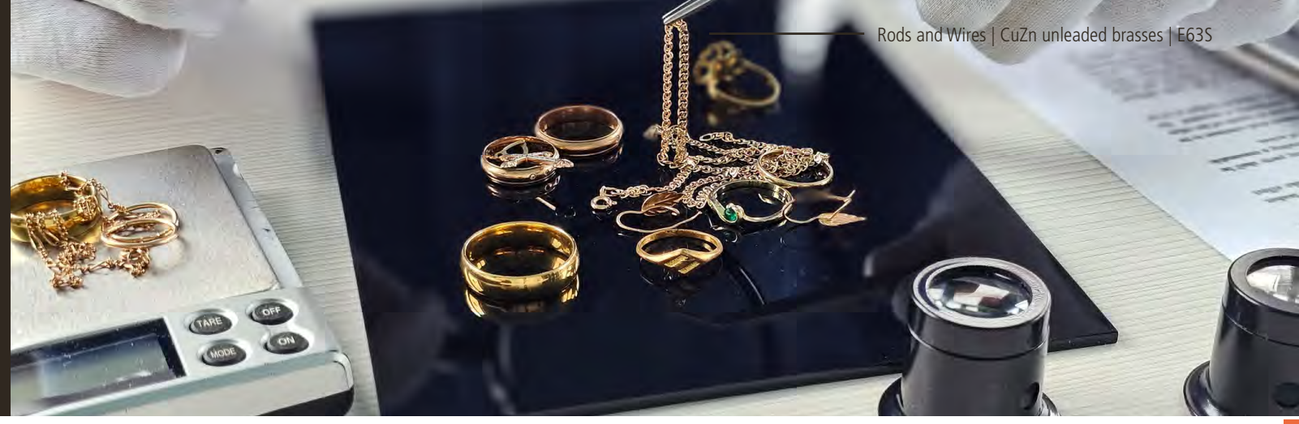
- Fasteners
- Mechanical components

E63S
CuZn37

Cu copper | Zn zinc

Back

E63S is an unleaded brass alloy offering good hot formability, solid strength, and reliable brazing performance. It is widely used in screws and rivets and the jewelry industry, where precision and durability are essential.



Rods and Wires | CuZn unleaded brasses | E63S

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn37	C27200	CW508L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Zn
63.0%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm³
Thermal conductivity at 20 °C	120 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.2 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	920 °C
Electrical properties	
Electrical conductivity	26 %IACS

TYPICAL APPLICATIONS

Jewelry industry
Zip fasteners
Screws and rivets

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering

KEY FEATURES

Good corrosion resistance (atmospheric conditions, fresh water, neutral and alkaline salt solutions, organic compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 12.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R290	≤ 230	≥ 290	≥ 30%	≥ 40%	≥ 45%	
H055						55 - 110
R370	≥ 240	≥ 370	≥ 10%	≥ 12%	≥ 14%	
H095						95 - 140
R460	≥ 330	≥ 460	≥ 4%	≥ 6%		
H115						115 - 155
R550	≥ 450	≥ 550	≥ 2%	≥ 5%		
H130						130 - 170
R700	≥ 550	≥ 700				
H160						≥ 160

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

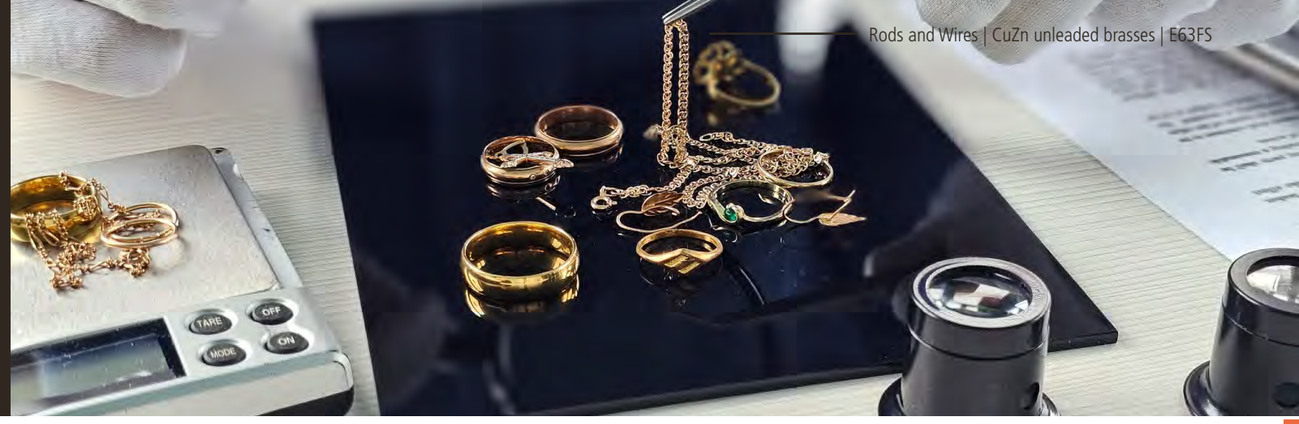
E63FS
CuZn36

29 63.546 Cu copper

30 65.38 Zn zinc

Back

E63FS is an unleaded brass that combines good machinability with strong mechanical properties and excellent hot forming capability. It is ideal for screws and rivets and jewelry components, ensuring dimensional accuracy and long-term reliability.



Rods and Wires | CuZn unleaded brasses | E63FS

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn36	C27200	CW507L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
64.5%	< 0.01%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm³
Thermal conductivity at 20 °C	120 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.2 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	920 °C
Electrical properties	
Electrical conductivity	26 %IACS

TYPICAL APPLICATIONS

Jewelry industry

Zip fasteners

Screws and rivets

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Hot working

Soldering

KEY FEATURES

Good corrosion resistance (atmospheric conditions, fresh water, neutral and alkaline salt solutions, organic compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 12.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R290	≤ 230	≥ 290	≥ 30%	≥ 40%	≥ 45%	
H055						55 - 110
R370	≥ 240	≥ 370	≥ 10%	≥ 12%	≥ 14%	
H095						95 - 140
R460	≥ 330	≥ 460	≥ 4%	≥ 6%		
H115						115 - 155
R550	≥ 450	≥ 550	≥ 2%	≥ 5%		
H130						130 - 170
R700	≥ 550	≥ 700				
H160						≥ 160

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

E70
CuZn30

29 63.546 Cu copper
30 65.38 Zn zinc

Back

E70 is an unleaded brass that provides a balance of mechanical strength, good conductivity, and excellent formability for precision parts. It is commonly applied in the electrical and electronics industry and for cold-formed components, where performance and stability matter.

Rods and Wires | CuZn unleaded brasses | E70

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn30	C26000	CW505L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Zn
70%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.5 g/cm³
Thermal conductivity at 20 °C	121 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	19.7 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	954 °C
Electrical properties	
Electrical conductivity	27 %IACS

TYPICAL APPLICATIONS

Electrical and electronics industries

Fasteners (screws and rivets)

Zip fasteners cold formed parts

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Hot working

Soldering

KEY FEATURES

Good corrosion resistance (atmospheric conditions, fresh water, neutral and alkaline salt solutions, organic compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 12.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R280	≤ 250	≥ 280	≥ 37%	≥ 40%	≥ 43%	
H070						7 - 120
R370	≥ 320	≥ 370	≥ 12%	≥ 14%	≥ 16%	
H110						110 - 140
R460	≥ 310	≥ 460	≥ 4%	≥ 7%		
H140						≥ 140
R550	≥ 450	≥ 550	≥ 3%			
H165						≥ 165

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

E80
CuZn20

29 63.546 Cu copper
30 65.38 Zn zinc

Back

E80 is an unleaded brass that offers good corrosion resistance, stable electrical properties, and reliable machinability for demanding uses.It is widely used in electronics and mechanical engineering, where durability and precision are critical.

Rods and Wires | CuZn unleaded brasses | E80

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn20	C24000	CW503L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Zn
80%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.8 g/cm³
Thermal conductivity at 20 °C	142 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	18.8 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	1000 °C
Electrical properties	
Electrical conductivity	33 %IACS

TYPICAL APPLICATIONS

Electronics industries
Fasteners (screws and rivets)
Others
Mechanical engineering
Jewelry

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Soldering

KEY FEATURES

Good corrosion resistance (atmospheric conditions, fresh water, neutral and alkaline salt solutions, organic compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 12.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R260	≤ 170	≥ 260	≥ 40%	≥ 42%	≥ 45%	
H065						65 - 105
R360	≥ 210	≥ 360	≥ 16%	≥ 18%	≥ 20%	
H105						105 - 140
R450	≥ 300	≥ 450	≥ 5%	≥ 6%		
H140						140 - 200
R540	≥ 450	≥ 540	≥ 2%			
H165						≥ 165

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

E85
CuZn15

29 63.546 Cu copper
30 65.38 Zn zinc

Back

E85 is an unleaded brass that delivers excellent electrical conductivity, good formability, and solid mechanical strength. It is ideal for the electrical industry and stamped and bent parts, ensuring reliability and ease of processing.

Rods and Wires | CuZn unleaded brasses | E85

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn15	C23000	CW502L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Zn
84.5%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.8 g/cm³
Thermal conductivity at 20 °C	159 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	18.5 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	1027 °C
Electrical properties	
Electrical conductivity	36 %IACS

TYPICAL APPLICATIONS

Electronics industries

Others

Jewelry

Stamped and bent parts

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Soldering

KEY FEATURES

Good corrosion resistance (atmospheric conditions, fresh water, neutral and alkaline salt solutions, organic compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 12.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R260	≤ 170	≥ 260	≥ 33%	≥ 35%	≥ 38%	
H060						65 - 105
R340	≥ 200	≥ 340	≥ 18%	≥ 20%	≥ 22%	
H105						105 - 135
R430	≥ 350	≥ 430	≥ 6%	≥ 8%		
H135						135 - 175
R530	≥ 450	≥ 530	≥ 3%			
H155						≥ 155

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

E90E
CuZn10

29 63.546 Cu copper
30 65.38 Zn zinc

Back

E90E is an unleaded brass that combines high electrical conductivity with excellent surface finish and good corrosion resistance. It is widely used in luxury applications and the electrical and electronics industry, where aesthetics and performance are key.

Rods and Wires | CuZn unleaded brasses | E90E

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn10	C22000	CW501L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Zn
90%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.8 g/cm³
Thermal conductivity at 20 °C	189 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	18.2 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	1045 °C
Electrical properties	
Electrical conductivity	43 %IACS

TYPICAL APPLICATIONS

Electrical and electronics industries

Luxury

Jewelry and watch

Others

Plating and enamelling applications

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Soldering

KEY FEATURES

Low sensitivity to stress-corrosion (in humid ammonia: stress relieve-annealing recommended),atmospheric conditions, fresh water, neutral and alkaline salt solutions, organic compounds

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 12.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R240	≤ 150	≥ 240	≥ 43%	≥ 45%	≥ 47%	
H050						50 - 100
R320	≥ 220	≥ 320	≥ 20%	≥ 23%	≥ 25%	
H095						95 - 125
R380	≥ 280	≥ 380	≥ 10%	≥ 11%	≥ 12%	
H115						115 - 155
R440	≥ 330	≥ 440	≥ 4%	≥ 5%		
H135						130 - 180
R530	≥ 450	≥ 530				
H160						≥ 160

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

E95
CuZn5

Cu copper | Zn zinc

Back

E95 is an unleaded brass that offers very high electrical conductivity, good corrosion resistance, and excellent suitability for decorative finishes. It is ideal for defense and munitions and luxury components, where precision and reliability under stress are essential.

Rods and Wires | CuZn unleaded brasses | E95

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn5	C21000	CW500L

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Zn
95%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.86 g/cm^3
Thermal conductivity at 20 °C	234 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	18.0 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	1045 °C
Electrical properties	
Electrical conductivity	57 %IACS

TYPICAL APPLICATIONS

Electronics industries
Plating and enamelling applications
Luxury
Jewelry and watch
Defence
Munitions

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Soldering

KEY FEATURES

Low sensitivity to stress-corrosion (in humid ammonia: stress relieve-annealing recommended),atmospheric conditions, fresh water, neutral and alkaline salt solutions, organic compounds

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 12.00 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

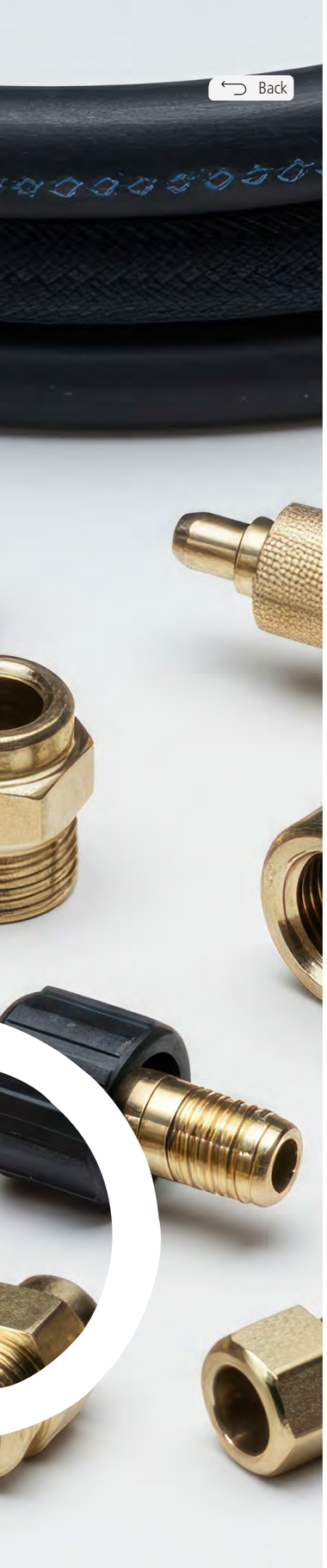
MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R240	60	≥ 240	≥ 20%	≥ 25%	≥ 30%	
H060						60 - 90
R290	25	≥ 290	≥ 10%	≥ 12%	≥ 15%	
H090						90 - 120
R350	310	≥ 350				
H105						≥ 105

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual



CuZnPb alloys
Standard brasses
Reference machinability

Standard brasses remain the benchmark for turned parts, including connectors and fine mechanical components. They are recognized for their superior machinability and crimping resistance, ensuring consistent performance.

PRODUCT PORTFOLIO

Alloy	ISO	UNS	EN
58D	CuZn39Pb3	C38500	CW614N
60M	CuZn38Pb2	C37700	CW608N
60AM	CuZn38Pb2 - antimagnetic	C37700	CW608N
61A	CuZn36Pb3	C36000	CW603N
62A	CuZn35Pb2	C34200, C34500	CW601N

STANDARD CAPABILITY

	Rods	Wires
Diameter	1.50 – 80 mm*	1.00 – 80 mm*

**Depending on alloy. Dimensions outside this range on request*

ESG Performance

We aim to offer our Customers products with the leading grade of environmental footprint. To achieve this, we make major investments in innovative processes aiming to optimize energy and water consumption and increasing the use of recycled raw materials. More specifically, we have developed state-of-the-art recycling know-how based on specialized purchasers for sourcing end of life materials to be processed in our Group Upcycling Workshop. Another key aspect of our ESG strategy is to offer substitutes for alloys that are not REACH and RoHS compliant.

Our CuZnPb alloys are:
- Mainly produced from recycled raw materials

REACH compliant

RoHS compliant

Markets and applications

Electronics

- Connectors

Others

- Mechanical components
- Turned parts

58D

CuZn39Pb3

Cu copper | Zn zinc | Pb Lead

Back

58D is the reference leaded-brass for machining (100% machinability index), offering excellent chip control and hot stamping capability. It is widely used in turning and drilling operations and for small mechanical components, where high productivity and post-forming precision are essential.

Rods and Wires | CuZnPb standard brasses | 58D

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn39Pb3	C38500	CW614N

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
58%	3%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.47 g/cm^3
Thermal conductivity at 20 °C	123 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.5 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	920 °C
Electrical properties	
Electrical conductivity	25 %IACS

TYPICAL APPLICATIONS

Electrical industry

Others

Free machining material
Turning drilling and milling
Small mechanical components
Writing implements

COMPATIBLE DOWNSTREAM PROCESS

Hot working
Soldering
Welding
Machining

KEY FEATURES

Corrosion resistant (against stress corrosion cracking in the stress relieved or soft annealed condition)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 80 mm
Wires	1.00 - 80 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R360		≥ 360	≥ 15%	≥ 20%		
H095						95 - 130
R430	≥ 220	≥ 430	≥ 6%	≥ 8%	≥ 10%	
H115						115 - 170
R500	≥ 350	≥ 500	≥ 2%	≥ 5%		
H145						≥ 145
R550		≥ 550				

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

60M

CuZn38Pb2

Cu copper | Zn zinc | Pb Lead

Back

60M is a medium-leaded brass combining excellent machinability with moderate cold formability, ideal for dual-process parts. It is commonly used in plug pins and sanitary fittings, where both shaping and machining performance are required.

Rods and Wires | CuZnPb standard brasses | 60M

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn38Pb2	C37700	CW608N

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
60%	2%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.44 g/cm^3
Thermal conductivity at 20 °C	110 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.5 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	905 °C
Electrical properties	
Electrical conductivity	22 %IACS

TYPICAL APPLICATIONS

Electrical industry

Plug pins

Sanitary industry

Others

Free-machining material

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding
Machining

KEY FEATURES

Corrosion resistant (atmospheric conditions, fresh water, neutral and alkaline salt solutions, organic compounds)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 80 mm
Wires	1.00 - 80 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R360	≤ 300	≥ 360	≥ 10%	≥ 15%	≥ 20%	
H080						80 - 110
R410	≥ 220	≥ 410	≥ 8%	≥ 10%	≥ 12%	
H100						100 - 160
R500	≥ 350	≥ 500	≥ 2%	≥ 5%		
H130						≥ 130

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

60AM

CuZn38Pb2

Cu copper | Zn zinc | Pb Lead

Back

60AM is a low-iron leaded-brass alloy designed for non-magnetic applications requiring strong cold deformation and machining. It is widely used in thread rolling and complex formed parts, where magnetic neutrality and mechanical integrity are essential.

Rods and Wires | CuZnPb standard brasses | 60AM

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn38Pb2	C37700	CW608N

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
60 - 61%	1.6 - 2.5%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.4 g/cm³
Thermal conductivity at 20 °C	110 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.5 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	905 °C
Relative magnetic permeability	1
Electrical properties	
Electrical conductivity	22 %IACS

TYPICAL APPLICATIONS

Any pieces with a combination of machining and strong cold deformation
Thread rolling

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding
Thermal stress relieve
Annealing
Polishing
Galvanic plating
Machining

KEY FEATURES

Corrosion resistant (stress corrosion, industrial atmosphere, rural atmosphere)
Non-magnetic

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 80 mm
Wires	1.00 - 80 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R360	≤ 300	≥ 360	≥ 10%	≥ 15%	≥ 20%	
H080						80 - 110
R410	≥ 220	≥ 410	≥ 8%	≥ 10%	≥ 12%	
H100						100 - 160
R500	≥ 350	≥ 500	≥ 2%	≥ 5%		
H130						≥ 130

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

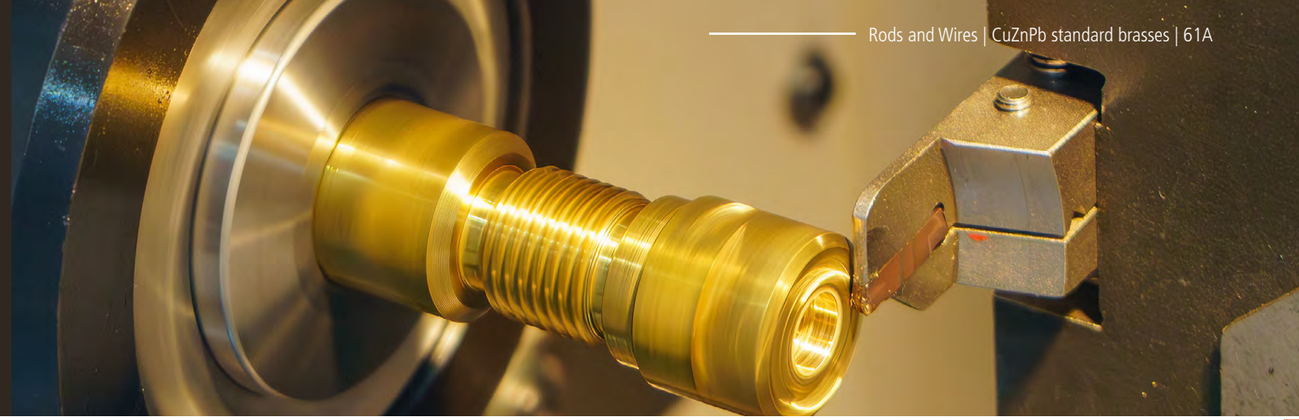
61A

CuZn36Pb3

Cu	Zn	Pb
copper	zinc	Lead

Back

61A is leaded-brass offers high machinability and good mechanical properties, making it suitable for mass production of small components. It is commonly used in free-machining applications and precision turned parts, where speed and consistency are key.



Rods and Wires | CuZnPb standard brasses | 61A

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn36Pb3	C36000	CW603N

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
60.3 - 61.2%	2.9 - 3.5%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.5 g/cm^3
Thermal conductivity at 20 °C	120 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	20.5 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	905 °C
Electrical properties	
Electrical conductivity	22 %IACS

TYPICAL APPLICATIONS

Various turned parts

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding
Machining

KEY FEATURES

Corrosion resistant (to stress corrosion, industrial atmosphere, rural atmosphere)
Very good machinability

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 80 mm
Wires	1.00 - 80 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R340	≤ 280	≥ 340	≥ 10%	≥ 15%	≥ 20%	
H080						80 - 130
R400	≥ 200	≥ 400	≥ 4%	≥ 8%	≥ 12%	
H100						100 - 150
R480	≥ 350	≥ 480	≥ 2%	≥ 5%		
H135						≥ 135

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

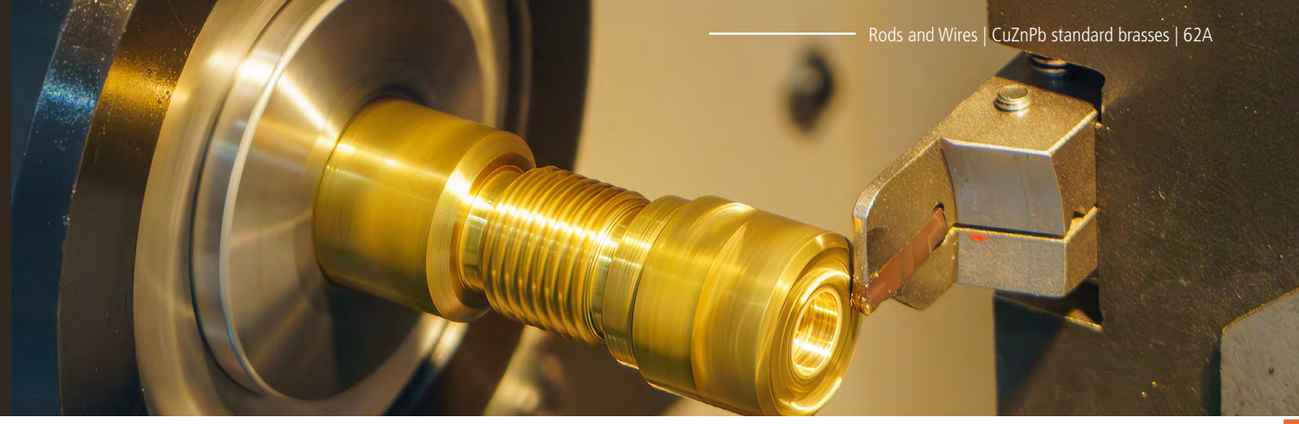
62A

CuZn35Pb2

29	30	82
63.546	65.38	207.200
Cu	Zn	Pb
copper	zinc	Lead

Back

62A is a leaded brass alloy with excellent chip-breaking behavior and stable electrical conductivity. It is ideal for electrical connectors and precision components, where machinability and performance under load are critical.



Rods and Wires | CuZnPb standard brasses | 62A

MATERIAL DESIGNATION

ISO	UNS	Others
CuZn35Pb2	C34200, C34500	CW601N

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Pb	Zn
62.0 - 63.5%	1.6 - 2.5%	Balance

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.46 g/cm^3
Thermal conductivity at 20 °C	115 W/m.°C
Coefficient of thermal expansion from 20 to 200 °C	19.5 x 10^{-6}/°C
Young's modulus	105 GPa
Melting point	1000 °C
Electrical properties	
Electrical conductivity	24 %IACS

TYPICAL APPLICATIONS

Various turned parts

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding
Machining

KEY FEATURES

Corrosion resistant (to stress corrosion, industrial atmosphere, rural atmosphere)
Very good machinability

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 80 mm
Wires	1.00 - 80 mm

Dimensions outside these ranges on request

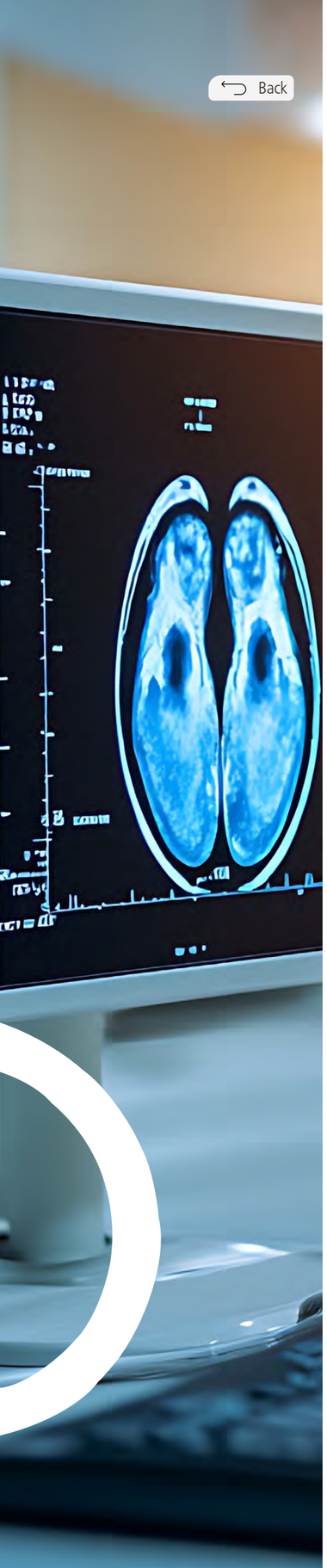
MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%)			Hardness (HV)
			A (100)	A (11.3)	A (5.65)	
Other tempers on demand						
R340	≤ 280	≥ 340	≥ 10%	≥ 15%	≥ 20%	
H080						80 - 130
R400	≥ 200	≥ 400	≥ 4%	≥ 8%	≥ 12%	
H100						100 - 150
R480	≥ 350	≥ 480	≥ 2%	≥ 5%		
H135						≥ 135

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual



Cu
Pure coppers
Reference electrical conductivity

We offer pure copper alloys for high-end applications, especially in electronics and power distribution. Their key advantage: 100% IACS electrical conductivity, guaranteeing maximum efficiency.

PRODUCT PORTFOLIO

Alloy	ISO	UNS	EN
CUOF	Cu-OF	C10200	CW008A
CUSC	SC-Cu	C11040	CW003A
ECU	Cu-ETP	C11000	CW004A

STANDARD CAPABILITY

	Rods	Wires
Diameter	1.50 – 16.00 mm*	1.00 – 10.00 mm*

**Depending on alloy. Dimensions outside this range on request*

ESG Performance

We aim to offer our Customers products with the leading grade of environmental footprint. To achieve this, we make major investments in innovative processes aiming to optimize energy and water consumption and increasing the use of recycled raw materials. More specifically, we have developed state-of-the-art recycling know-how based on specialized purchasers for sourcing end of life materials to be processed in our Group Upcycling Workshop. Another key aspect of our ESG strategy is to offer substitutes for alloys that are not REACH and RoHS compliant.

Our pure coppers are:
- REACH and RoHS compliant
- Mainly produced from recycled raw materials

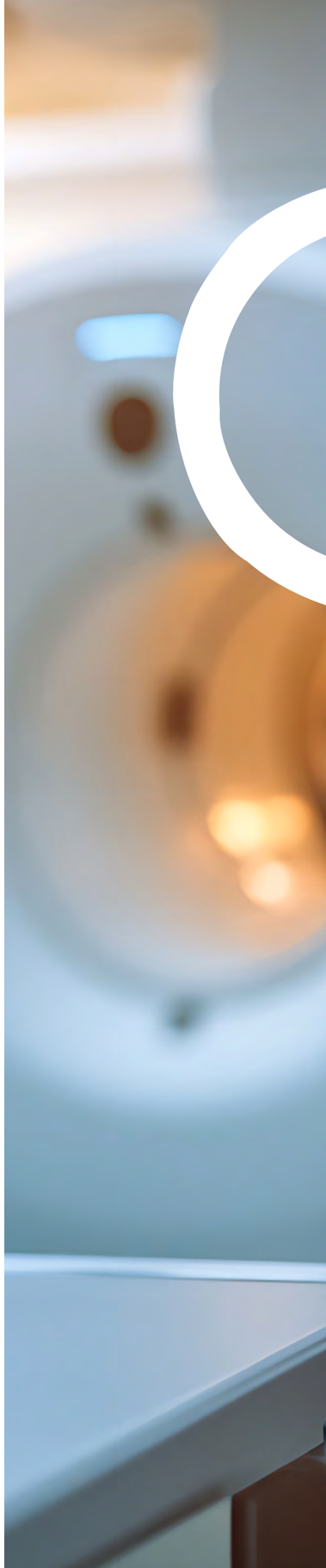
Markets and applications

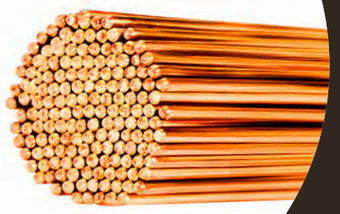
Automotive

- Electrical conductors
- Busbars
- Switches
- Cables

Electronic

- Connectors
- Contactors



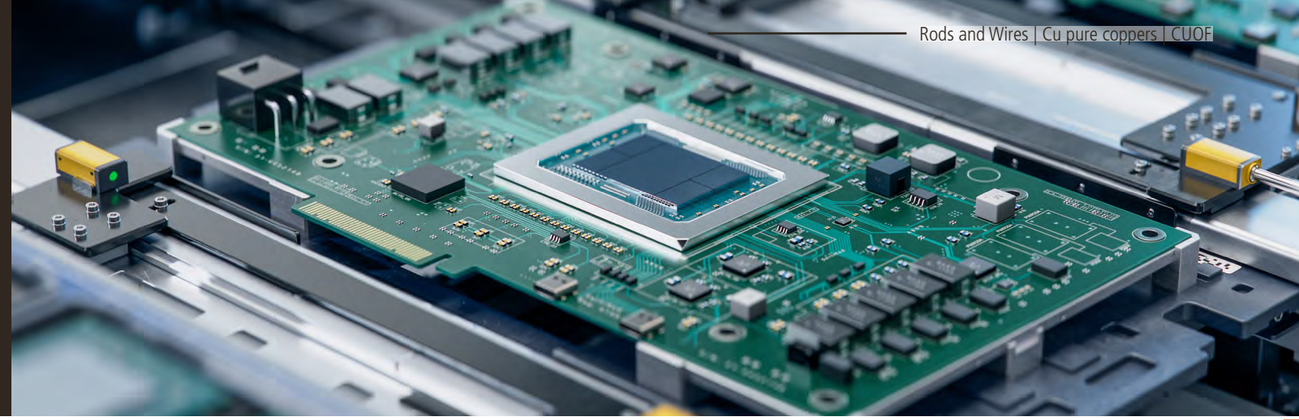


CUOF
Cu-OF

Cu
copper

Back

CUOF is a high-purity copper alloy offering excellent electrical conductivity, thermal stability, and vacuum compatibility. It is widely used in electrical conductors and busbars and in vacuum seals and anodes, where purity and performance are critical.



Rods and Wires | Cu pure coppers | CUOF

MATERIAL DESIGNATION

ISO	UNS	Others
Cu-OF	C10200	CW008A

CHEMICAL COMPOSITION (WEIGHT%)

Cu	Bi	Pb
≥ 99.95%	≤ 0.0005%	≤ 0.005%

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.93 g/cm^3
Thermal conductivity at 20 °C	390 W/m.°C
Coefficient of thermal expansion from 20 to 300 °C	17.7 x 10^{-6}/°C
Young's modulus	127 GPa
Melting point	1083 °C
Electrical properties	
Electrical conductivity	100 %IACS

TYPICAL APPLICATIONS

Electrical and electronics industries
Electrical conductors
Busbars and feeder bars
Switches, contacts, socket and terminal pins
Automotive Industry
Rectifiers
Coaxial cables and tubes
Vacuum seals and anodes for vacuum tubes etc

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding

KEY FEATURES

Good corrosion resistance (natural atmosphere, drinking water, industrial water, non-oxidizing acids, neutral salt solutions, etc.)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 11.50 mm
Wires	1.00 - 11.50 mm

Dimensions outside these ranges on request

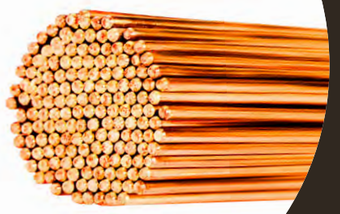
MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%) A (100)	Hardness (HV)
Other tempers on demand				
R200	≤ 120	200 - 250	≥ 25%	35 - 65
R250	≥ 200	250 - 300	≥ 8%	65 - 95
R300	≥ 260	300 - 350	≥ 5%	90 - 115
R350	≥ 320	≥ 350	≥ 3%	≥ 115

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual

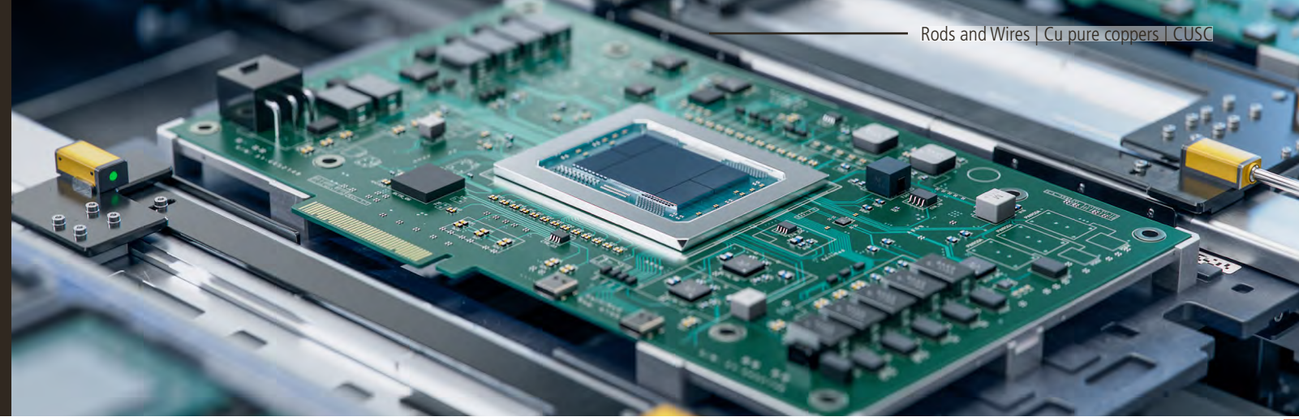


CUSC
Cu-ETP1

Cu
copper

Back

CUSC is a refined copper grade designed for high-conductivity and precision in electronic components and connectors. It is ideal for contact springs and electrical connectors, where reliability and signal integrity are essential.



Rods and Wires | Cu pure coppers | CUSC

MATERIAL DESIGNATION

ISO	UNS	Others
Cu-ETP1	C11040	CW003A

CHEMICAL COMPOSITION (WEIGHT%)

Cu	O	Bi	Pb
Balance	≤ 0.02%	≤ 0.0002%	≤ 0.0005%

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.93 g/cm^3
Thermal conductivity at 20 °C	390 W/m.°C
Coefficient of thermal expansion from 20 to 300 °C	17.7 x 10^{-6}/°C
Young's modulus	127 GPa
Melting point	1083 °C
Electrical properties	
Electrical conductivity	100 %IACS

TYPICAL APPLICATIONS

Electronical industry
Electrical components and connectors
Contact springs
Electrical contacts
Conductor wires

COMPATIBLE DOWNSTREAM PROCESS

Cold working
Hot working
Soldering
Welding

KEY FEATURES

Good corrosion resistance (natural atmosphere, drinking water, industrial water, non-oxidizing acids, neutral salt solutions, etc.)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1.50 - 7.00 mm
Wires	1.00 - 7.00 mm

Dimensions outside these ranges on request

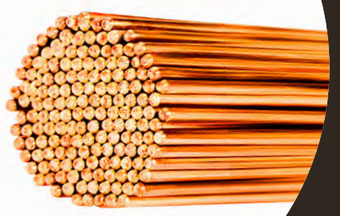
MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%) A (100)	Hardness (HV)
Other tempers on demand				
R200	≤ 120	200 - 250	≥ 25%	35 - 65
R250	≥ 200	250 - 300	≥ 8%	65 - 95
R300	≥ 260	300 - 350	≥ 5%	90 - 115
R350	≥ 320	≥ 350	≥ 3%	≥ 115

OTHER AVAILABLE FORMS

Standard and complex profiled bars and wires

Disclaimer : Data for information only, non-contractual



ECU
Cu-ETP

Cu
copper

Back

ECU is a standard high-conductivity copper alloy combining excellent electrical performance with good formability. It is widely used in automotive conductors and architectural components, where conductivity and aesthetics are key.

Rods and Wires | Cu pure coppers | ECU

MATERIAL DESIGNATION

ISO	UNS	Others
Cu-ETP	C11000	CW004A

CHEMICAL COMPOSITION (WEIGHT%)

Cu	O	Pb	Bi
≥ 99.9%	≤ 0.04%	≤ 0.005%	≤ 0.0005%

PHYSICAL PROPERTIES

General properties	
Density at 20 °C	8.93 g/cm^3
Thermal conductivity at 20 °C	390 W/m.°C
Coefficient of thermal expansion from 20 to 300 °C	17.7 x 10^{-6}/°C
Young's modulus	127 GPa
Melting point	1083 °C
Electrical properties	
Electrical conductivity	100 %IACS

TYPICAL APPLICATIONS

Automotive

Cables, conductors

Contacts, conductors, switches, busbars, lightning conductors, electrodes

Others

Apparatus for chemical purposes

Decorative purposes, architecture

COMPATIBLE DOWNSTREAM PROCESS

Cold working

Hot working

Soldering

Welding

KEY FEATURES

Good corrosion resistance (natural atmosphere, drinking water, industrial water, non-oxidizing acids, neutral salt solutions, etc.)

STANDARD CAPABILITY

Format	Size diameter Ø
Rods	1 - 10 mm
Wires	1 - 10 mm

Dimensions outside these ranges on request

MECHANICAL PROPERTIES

Temper	Yield Strength 0.2% (MPa)	Tensile Strength (MPa)	Elongation (%) A (100)	Hardness (HV)
Other tempers on demand				
R200	≤ 120	200 - 250	≥ 25%	35 - 65
R250	≥ 200	250 - 300	≥ 8%	65 - 95
R300	≥ 260	300 - 350	≥ 5%	90 - 115
R350	≥ 320	≥ 350	≥ 3%	≥ 115

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Table
Rods and wires product portfolio

Alloy name	ISO	UNS	Other designations
CuZnNi alloys			
Niclal®120	CuNi12Zn24	C75700	CW403J, NF EN 1652 ASTM B151
Niclal®180	CuNi18Zn21		CW409J, NF EN 1652
EnviN1	CuNi12Zn38Mn5		
ENVN0701	CuNi7Zn42		
NM2	CuNi7Zn39Pb3Mn2		CW400J
NM436	CuNi11Zn37Mn5Pb2		CW407J
Strong 400	CuNi37Zn12		
CuSn alloys			
BZ3	CuSn4	C51100	CW450K
BZ5	CuSn5	C51000	CW451K
BZ6	CuSn6	C51900	CW452K
BZ8	CuSn8	C52100	CW453K
BP5	CuSn5Pb1	C53400	CW458K
BZ4	CuSn4Pb4Zn4	C54400	CW456K
BZ4 ZeST®	Proprietary	Lead-free alternative to BZ4	
Special CuZn alloys			
SML60	CuZn40MnSi		CF726R
SML61	CuZn39Mn1SiSn		CF728R
SMBKM	CuZn35Ni3Mn2AlPb		CW710R
SM58	CuZn37Mn3Al2PbSi		CW713R
Machinable CuZn alloys			
EnviB1	CuZn40		CW509L
EnviB10	CuZn40		CW509L
EA	CuZn40	C28000	CW509L
Z40	CuZn40	C28000	CW509L
EnviB10AM	CuZn40 - antimagnetic	C28000	CW509L
EnviB58	CuZn42		CW510L
EnviB158	CuZn42		CW510L
Z42	CuZn42		CW510L
S42	CuZn42		CW510L
EnviBEco	CuZn21Si3P	C69300	CW724R

Table
Rods and wires product portfolio

Alloy name	ISO	UNS	Other designations
CuZn alloys			
E63S	CuZn37	C27200	CW508L
E63FS	CuZn36	C27200	CW507L
E70	CuZn30	C26000	CW505L
E80	CuZn20	C24000	CW503L
E85	CuZn15	C23000	CW502L
E90E	CuZn10	C22000	CW501L
E95	CuZn5	C21000	CW500L
CuZnPb alloys			
58D	CuZn39Pb3	C38500	CW614N
60M	CuZn38Pb2	C37700	CW608N
60AM	CuZn38Pb2 - antimagnetic	C37700	CW608N
61A	CuZn36Pb3		CW603N
62A	CuZn35Pb2	C34200, C34500	CW601N
Pure coppers			
CUOF	Cu-OF	C10200	CW008A
CUSC	SC-Cu	C11040	CW003A
ECU	Cu-ETP	C11000	CW004A

Standard capability		
	Rods	Wires
Diameter	1.50 – 80.0 mm*	1.00 – 80.0 mm*

**Depending on alloy. Dimensions outside this range on request*

lebronze alloys

Critical metallurgy

www.lebronze-alloys.com

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