TAIWAN

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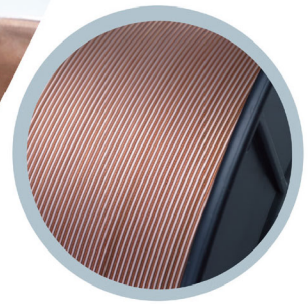
CHUNG I SILVER SOLDER

CATALOGUE



ABOUT US

Since our establishment in 1978, CHUNG I has focused on developing advanced technology and maintaining stable quality with support from the industrial sector. We manufacture a wide range of products, from silver brazing alloys to high-tech soldering materials, fuse conductivity wires, advanced glass soldering wires, and tri-foil alloys. In 1986, we also invested in an abrasive factory in Taiwan to expand our capabilities.

To stay competitive in the 21st century, we not only focus on enhancing quality and developing new products but also strive to improve customer service and expand our global reach. In line with this, we established a branch factory in Dongguang, China, which began production in 2003.

Committed to our principles of integrity, innovation, and continuous improvement, we aim to provide our customers with high-quality products and advanced technology. We sincerely welcome your continued support and feedback.

CHUNG-I

SILVER SOLDER CO. LTD


afaq

Certificat
Certificate

N° 2021/90184.2 Page 1 / 1

CHUNG I SILVER SOLDER CO., LTD.
中一銀焊條股份有限公司

MANUFACTURE AND SALE OF ALLOY SOLDER

has been assessed and found to meet the requirements of
ISO 9001 : 2015

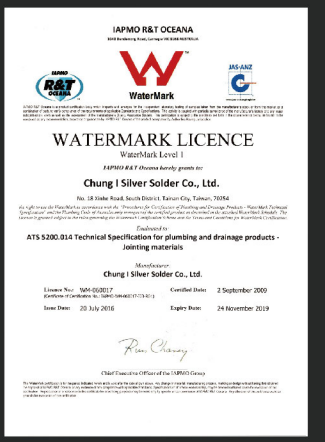
and is developed on the following locations:

NO. 18, XIN HE RD., SOUTH DIST., TAINAN CITY, TAIWAN, R.O.C.

2024-01-07 2027-01-06

Julien MERE
Managing Director of AFNOR Certification

afnor


IAPMO R&T OCEANA

WaterMark

JAS-ANZ

WATERMARK LICENCE
WaterMark Level 1

IAPMO R&T Oceana hereby grants to:

Chung I Silver Solder Co., Ltd.

No. 18 Xinhe Road, South District, Tainan City, Taiwan, 70764

Endorsed to:

ATS 5200.014 Technical Specification for plumbing and drainage products - Jointing materials

Manufacturer:

Chung I Silver Solder Co., Ltd.

Licence No: WM-050017 Certified Date: 2 September 2009

Issue Date: 20 July 2016 Expiry Date: 24 November 2019

Chief Executive Officer of the IAPMO Group

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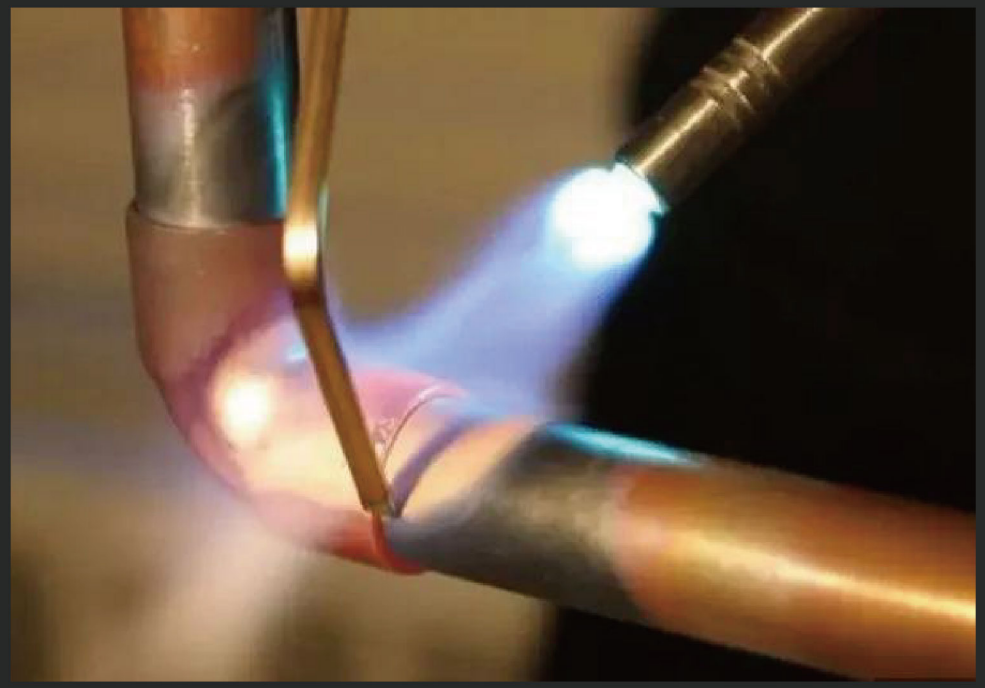
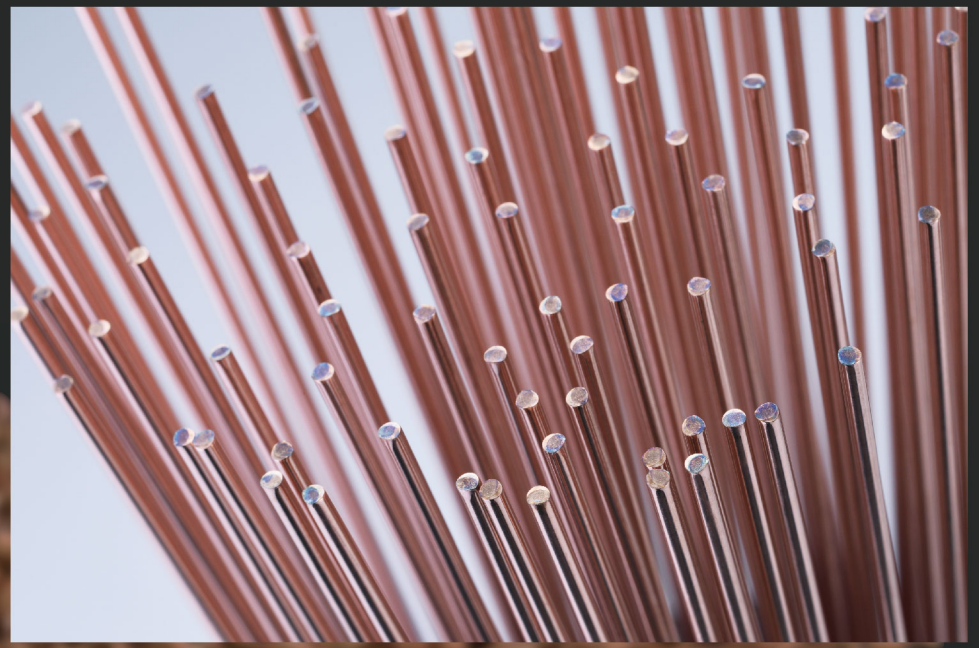
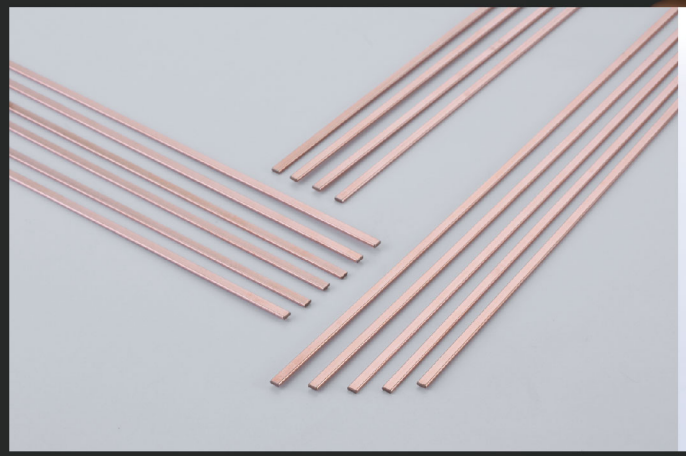
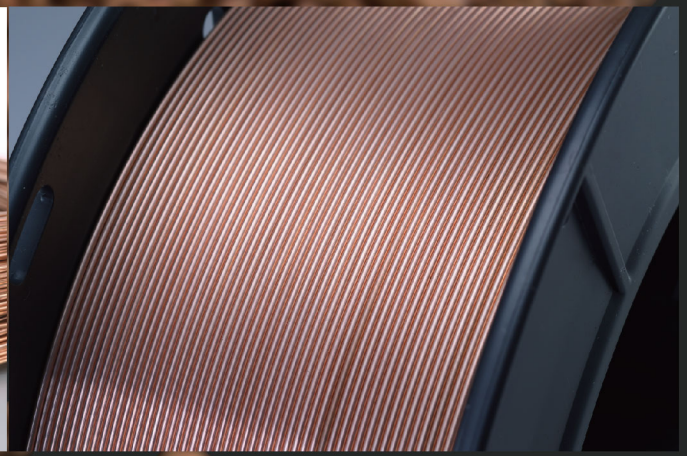


COPPER PHOSPHORUS BRAZING ALLOYS

Alloys with a high phosphorus content are more active and fluid, allowing them to flow over larger areas, making them ideal for capillary filler joints. These alloys typically have a narrower melting range, enhancing precision during the brazing process. A higher proportion of silver improves flow control, making the alloy easier for operators to handle. In contrast, silver alloys with lower phosphorus content tend to have a broader melting range, which is advantageous for filling wider gaps. Generally, alloys with higher silver content can withstand higher temperatures and longer heating cycles, while also producing joints with superior ductility and strength.







Primary applications: Refrigerator, air conditioner, heating exchanger, electric machine, brass alloy and others.

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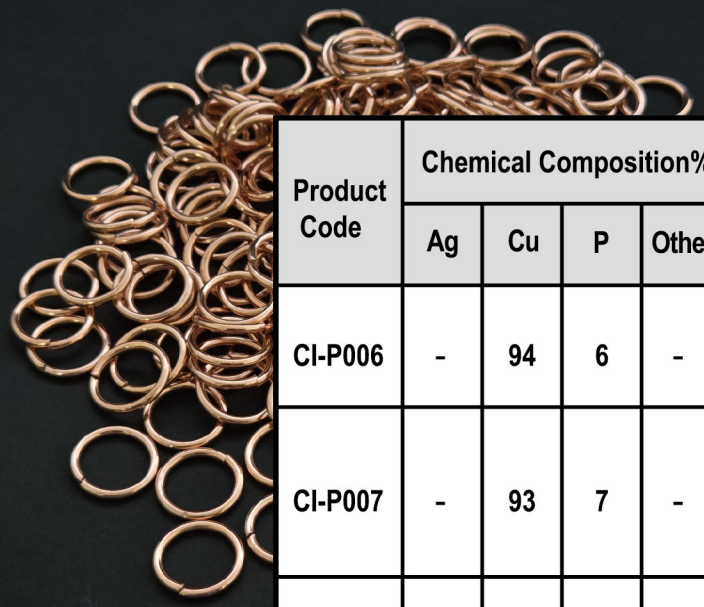
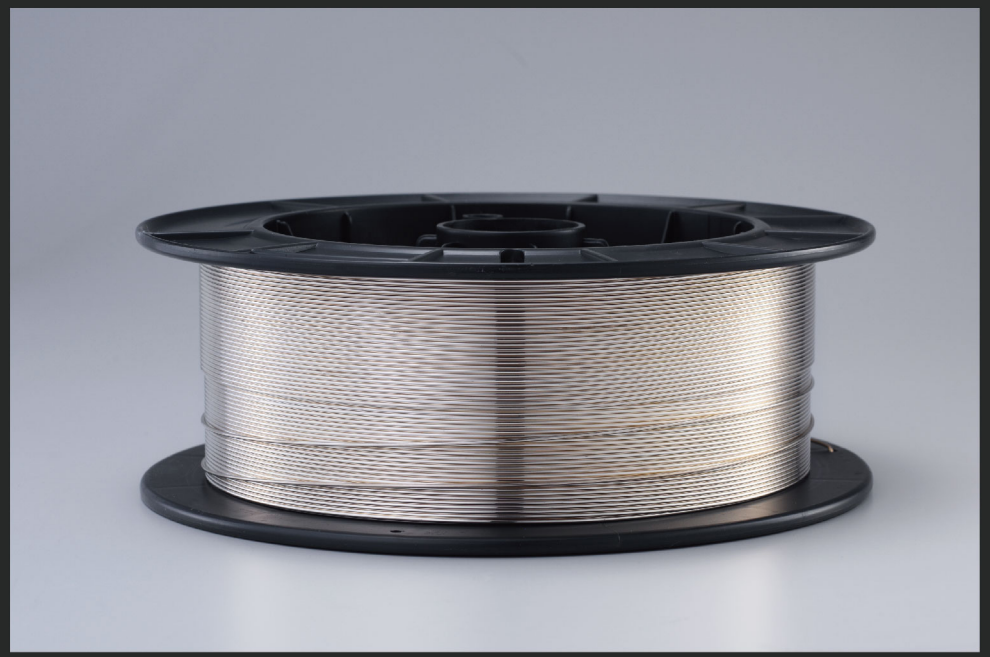


Product Code	Chemical Composition%				AWS/JIS	Melting Range	Operating Temp.	Density g/cm³	Application
	Ag	Cu	P	Other	Spec.class	℃	℃		
CI-P006	-	94	6	-	-	710~890	760	8.1	Used for copper brazing.Moderate flow; able to bridge large gaps. The melting range is wide, making it suitable when joint tolerance cannot be maintained.
CI-P007	-	93	7	-	BCuP-2	710~820	730	8.1	One of the most popular alloys for copper brazing. This alloy flows moderately along the joint borders, helping reduce alloy spread across the surface. Commonly used in the refrigeration,air- conditioning industry, and automated processes.
CI-P008	-	92	8	-	-	710~770	720	8.0	Used for-copper brazing. Features rapid and extensive fluidity,which may result in alloy spreading to unintended areas- difficult to control manually.
CI-001	1	92	7	-	-	640~800	740	8.1	Similar to CI-002 but contains less silver,reduce costs.
CI-002	2	91	7	-	BCuP-6	640~790	740	8.1	Used for copper brazing.Flows slowly.
CI-003	3	91	6	-	-	630~785	720	8.2	Used for copper brazing.Flows slowly.Can be used as a cost-saving alternative to CI-005.
CI-005	5	89	6	-	BCuP-3	650~810	710	8.2	Used for copper or brass brazing in the refrigeration and air-conditioning industries.Same as CI-151 but with lower silver content to save costs.
CI-006	6	86.8	7.2	-	BCuP-4	645~725	700	8.3	Used for copper or brass brazing.Offers good fluidity.
CI-151	15	80	5	-	BCuP-5	650~800	700	8.4	Used for copper or brass brazing.Has a low melting range with good fluidity,applicable across various industies.
CI-P181	18	74.8	7.2	-	-	645~670	650	8.4	Used for copper or brass brazing in tight-fitting joints or small clearances.
CI-Sn7	-	86.25	6.75	Sn 7	BCuP-9	650~700	700	8.0	Used for copper or brass brazing with a lower melting range and good fluidity.It can replace silver-bearing phosphorus alloys such as CI-002 or CI-005,or even high-silver filler metals for copper-to-copper or copper -to-brass joints.

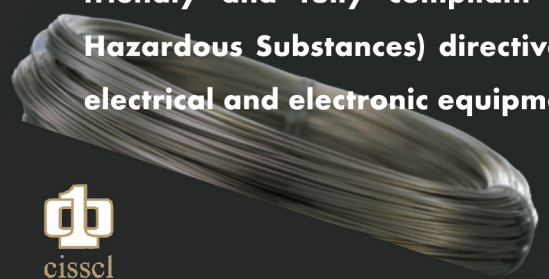
CADMIUM FREE SILVER BRAZING ALLOYS



Cadmium-free silver brazing alloys are widely utilized for soldering ferrous metals, copper and copper alloys, nickel and nickel alloys, as well as specialty metals such as tungsten carbide. The performance characteristics of these composite alloys vary based on their silver content. In general, a higher proportion of silver lowers the melting temperature and produces a whiter finish, in contrast to the typical brass coloration. Enhanced fluidity during the soldering process further supports precise and efficient bonding.

Primary Applications: Jointing most ferrous and non-ferrous base materials, refrigerator, air conditioner, electronics industry, ultra-hard materials (saw blades, cutters and drills), musical instruments and others.

Tin is commonly introduced into cadmium-free silver brazing alloys as a functional substitute for cadmium. When alloyed with silver, copper, and zinc, tin contributes to a reduced melting point and improved flow properties, particularly in applications involving ferrous metals. These alloys are environmentally friendly and fully compliant with the RoHS (Restriction of Hazardous Substances) directive, ensuring suitability for use in electrical and electronic equipments.



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Product Code	Chemical Composition%							AWS/JIS	Melting Range	Operating Temp.	Density g/cm³	Application
	Ag	Cu	Zn	Sn	Mn	Ni	In	Spec. Class	℃	℃		
CI-925	92.5	7.5	–	–	–	–	–	–	760~890	930	10.2	Used for furnace brazing of stainless steel without flux.
CI-721	72	28	–	–	–	–	–	BAg-8	780~780	780	10.0	Suitable for furnace brazing in a protective atmosphere without flux.
CI-701	70	20	10	–	–	–	–	BAg-10	725~750	–	9.8	Specifically used with sterling silver.
CI-602	60	26	14	–	–	–	–	–	695~730	710	9.5	Similar to CI-721.With lower melting range.
CI-562	56	22	17	5	–	–	–	BAg-7	620~650	650	9.4	To minimize corrosion and cracking of nickel or nickel-base alloys at low brazing temperature with good fluidity.
CI-502Ni	50	20	28	–	–	2	–	BAg-24	660~705	705	9.0	Used for brazing stainless steel, steel, tungsten carbide,nickel and copper alloys.
CI-4900	49	16	23	–	7.5	4.5	–	BAg-22	680~705	690	8.9	Used for low temperature brazing of tungsten carbides and stainless steel. Provides excellent flow characteristics on carbides.
CI-450	45	30	25	–	–	–	–	BAg-5	665~745	730	9.1	An excellent brazing alloy with good fluidity.
CI-452	45	27	25	3	–	–	–	BAg-36	640~680	670	9.2	Similar to CI-450,but lower melting range.
CI-400	40	30	30	–	–	–	–	–	675~725	780	8.8	Good penetration into tight connection and medium temperature.
CI-407	40	30	25	–	–	–	5	–	635~715	700	9.3	Good fluidity for brazing compressor parts.
CI-402Ni	40	30	28	–	–	2	–	BAg-4	670~780	780	8.9	Used extensively for carbide tip brazing. Also used for stainless steel, nickel alloy mostly for corrosion resistance and strength.
CI-402Sn	40	30	28	2	–	–	–	BAg-28	640~700	690	9.1	With a narrower melting range than other cad-free alloys but good fluidity Suitable for brazing ferrous & nonferrous base metals.
CI-382	38	32	28	2	–	–	–	BAg-34	650~720	710	8.8	Good fluidity and suitable for brazing ferrous & nonferrous base metals.
CI-350	35	32	33	–	–	–	–	BAg-35	680~750	740	9.0	Frequently used for brazing applications in the refrigeration industry.
CI-352	35	32	31	2	–	–	–	–	660~740	730	9.0	Good fluidity and suitable for brazing ferrous & nonferrous base metals. Used for equipment and tools in food and refrigeration industries.
CI-300	30	38	32	–	–	–	–	BAg-20	680~765	750	8.8	The moderate temperature alloy with good fluidity.
CI-302	30	36	32	2	–	–	–	–	665~755	740	8.8	Good fluidity and suitable for brazing ferrous & nonferrous base metals.
CI-252	25	40	33	2	–	–	–	BAg-37	685~770	750	8.7	An economical alloy for general brazing purpose.
CI-200	20	45	35	–	–	–	–	–	690~810	810	8.7	An economical alloy with large melting range.
CI-051	5	55	39.8	Si 0.2				–	820~870	860	8.4	Used for brazing electrical terminals. Higher melting range.

SINGLE/ TRI FOIL BRAZING ALLOYS

Silver and phosphorus copper brazing alloys offer high performance and versatility for diverse industrial applications and can be produced in sheet form upon request. For brazing tungsten carbide, silver alloys containing nickel or manganese improve wettability, joint strength, and bonding reliability.

For medium to large carbide segments, tri-foil products such as the CI-4900L series provide optimal stress relief between carbide and steel, preventing cracking and ensuring long-term durability. Available in large-format foils up to 105 mm wide, this alloy series delivers reliable, high-performance brazing solutions for both precision tools and heavy duty components.

Primary Applications: Ultra-hard materials (saw blades, cutters and drills), electronics industry, automotive industry and others.

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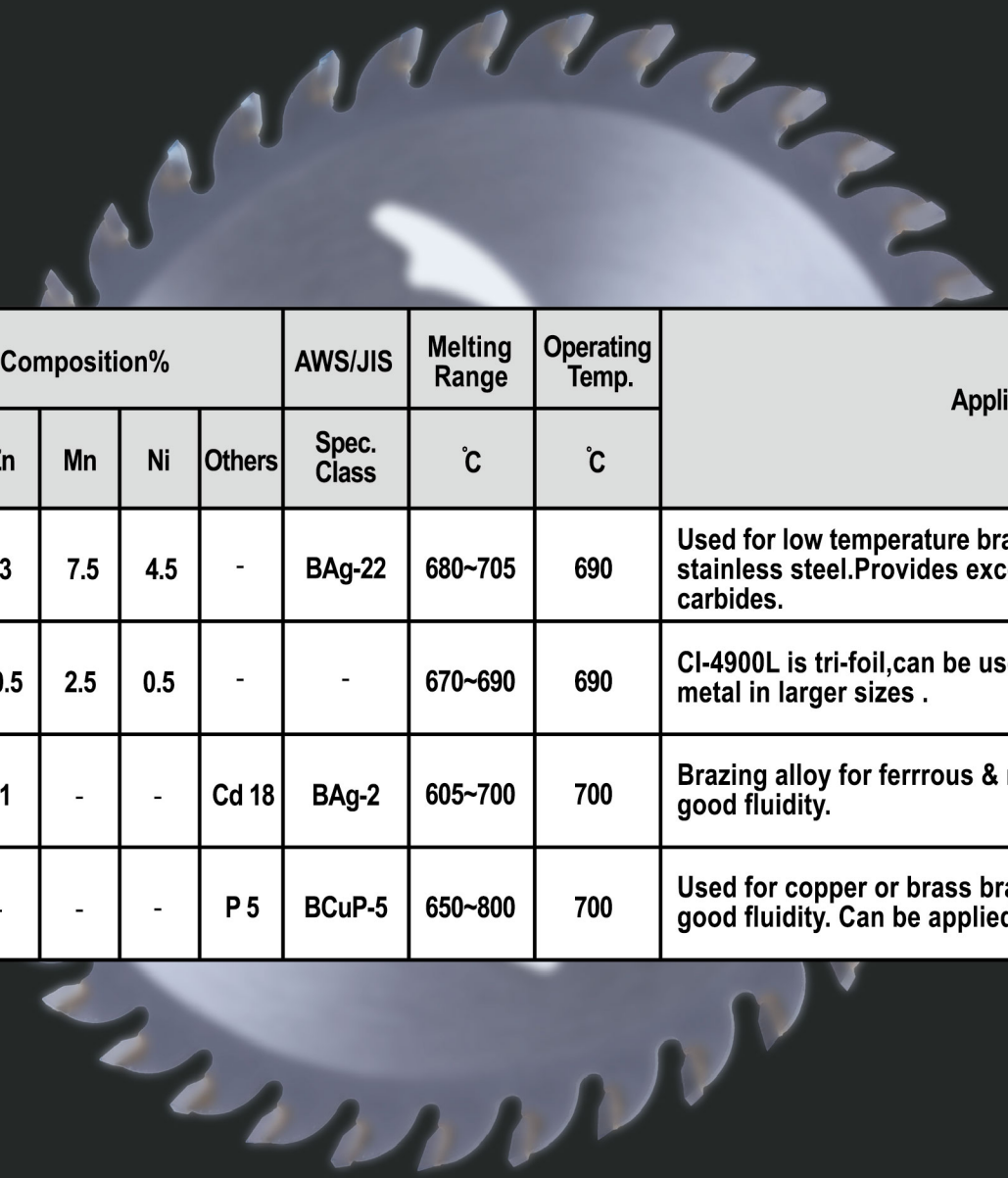

Product Code	Chemical Composition%						AWS/JIS	Melting Range	Operating Temp.	Application
	Ag	Cu	Zn	Mn	Ni	Others	Spec. Class	℃	℃	
CI-4900H	49	16	23	7.5	4.5	-	BAg-22	680~705	690	Used for low temperature brazing of tungsten carbide and stainless steel.Provides excellent flow characteristics on carbides.
CI-4900L	49	27.5	20.5	2.5	0.5	-	-	670~690	690	CI-4900L is tri-foil,can be used for brazing tungsten carbides metal in larger sizes .
CI-351	35	26	21	-	-	Cd 18	BAg-2	605~700	700	Brazing alloy for ferrrous & nonferrous base metals with good fluidity.
CI-151	15	80	-	-	-	P 5	BCuP-5	650~800	700	Used for copper or brass brazing.Low melting rang with good fluidity. Can be applied to various industries.

CADMIUM BEARING SILVER BRAZING ALLOYS

Due to the presence of zinc and cadmium, these alloys are not recommended for brazing stainless steel in wet or corrosive environments, where interfacial corrosion can compromise joint integrity. In such applications, cadmium-free, zinc-free, or nickel-enhanced alternatives should be selected. Further information on cadmium-free silver brazing alloys is available on the preceding page.

Safety Notice: Cadmium and its oxides are toxic substances. Strict adherence to safety protocols is required, including the use of mechanical ventilation and/or certified respirators during handling and brazing operations.

Primary Applications: Spectacle frames, electrical machinery, tools, building materials, brass alloys, various metals, steel, heat exchangers, air conditioners, heaters, shipbuilding, precision instruments, and other industrial uses

Product Code	Chemical Composition%					AWS/JIS	Melting Range	Operating Temp.	Density g/cm^3	Application
	Ag	Cu	Zn	Cd	Ni	Spec.class	˚C	˚C		
CI-501	50	15.5	16.5	18	–	BAg-1a	625~635	635	9.5	Suitable for brazing ferrous,non-ferrous,and dissimilar metals and alloys.Offers good fluidity and a low melting rang,making it ideal for a wide variety of applications.
CI-5009	50	15.5	15.5	16	3	BAg-3	630~690	660	9.5	High-strength alloy for brazing carbide,nickel,and ironbased alloys.Demonstrates excellent corrosion resistance,making it suitable for marine environments and caustic media.
CI-451	45	15	16	24	–	BAg-1	605~620	620	9.4	Equivalent to CI-501,but with 5% less silver content. Provides comparable perfomance at more cost effe-ctive composition.
CI-401	40	17	17	26	–	–	620~650	650	9.3	Brazing alloy for ferrous and non-ferrous base metals. Delivers consistent flow characteristics for reliable joint formation.
CI-351	35	26	21	18	–	BAg-2	605~700	700	9.1	
CI-301	30	27	23	20	–	BAg-2a	610~710	710	9.1	Slow-flow alloy for brazing ferrous, non-ferrous,and dissimilar metals. Designed for precise applications requiring controlled alloy distribution.
CI-251	25	30	27.5	17.5	–	BAg-33	620~745	720	8.8	Excellent fluidity for wide-gap joints. Note: The wide melting range requires careful heat control to avoid premature liquefaction.
CI-201	20	40	25	15	–	–	620~765	750	8.8	Good fluidity and compatible with brass components. Ideal for color matching in decorative or aesthetic applications.

FLUX-COATED/CORED BRAZING ALLOYS

Flux-coated/ flux-cored silver brazing alloys eliminate the need for repeated flux application during operation, helping to improve productivity while reducing both time and material costs. These alloys are especially suitable for ultra-hard tungsten cutters, lamp fittings, and various hand-welding applications where precision and efficiency are essential.

Primary Applications:

Ideal for joining ultra-hard alloys, cutting tools, tungsten steel, and steel or copper piping, this product is widely used across industries such as :

- Electrical equipment
- Aerospace materials
- Automotive components
- Optics and eyewear
- Jewelry manufacturing

Its versatility and reliability make it suitable for high precision and high performance applications.

COPPER ALLOYS

Copper brazing alloys—including general-purpose brass and bronze are cost-effective solutions commonly used for brazing copper, copper alloys, nickel, nickel-based alloys, and stainless steel. These alloys are suitable for both induction brazing and gas welding applications. To enhance performance, small amounts of elements such as tin, silicon, manganese, or nickel can be added to brass brazing alloys. These additions improve fluidity, corrosion resistance, and mechanical strength, resulting in stronger, more leak-tight joints that meet a wide range of technical requirements across various industries.

Primary Applications:

Refrigerator, air conditioner, heating exchanger, electric machine, repairing of defect parts of mechanical parts, valve seats, shafts, pistons, build-up welding of carbon steel, cast iron, copper pipes and cast iron parts.

ULTRA-ALLOY SOLDER FOR SPECTACLES

The ultra-alloy soldering material is especially suitable for glasses & spectacles business use.

Primary Applications:

High Manganese, Nickel-free Alloy, Nickel Alloy, Titanium Alloy, Stainless Steel Alloy, white Copper Alloy and others.

ALUMINUM ALLOYS

Aluminum and its alloys can be brazed using processes similar to other metals, but require specific fluxes, filler metals, and generally lower temperatures. Certain high-strength wrought and casting alloys are not suitable for brazing due to alloying elements that inhibit proper wetting and form complex oxide films.

Primary Applications:

Refrigerator, air conditioner, automotive and others.

SILVER FLUX POWDER / PASTE

This flux is formulated for use with silver and other soldering alloys with melting points up to 1800F (982C). It delivers consistent performance under low-temperature, prolonged, or uneven heating conditions, ensuring stable operation across a wide range of applications.

Particularly effective for soldering stainless steel and copper alloys, the flux enhances alloy fluidity and facilitates the removal of surface oxides, oil residues, and other contaminants. Performance remains stable across varying temperature ranges and extended heating cycles.

Compliant with international quality and safety standards, the product is offered in both powder and paste forms. Packaging options include 1kg containers and 30kg barrels to accomodate production requirements.

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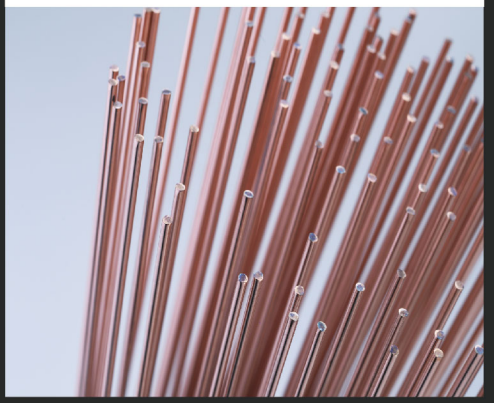
CHARACTERISTICS & MAKE UP

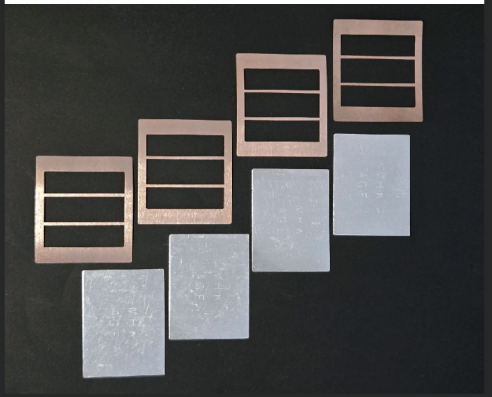
RINGS

STRIP&FOIL

RODS



PREFORMS



WIRES

COATED RODS

WIRES ON SPOOLS

FLUXES

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CHUNG I SILVER SOLDER CO. LTD

CHUNG I SILVER SOLDER CO. LTD 中一銀焊條股份有限公司

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