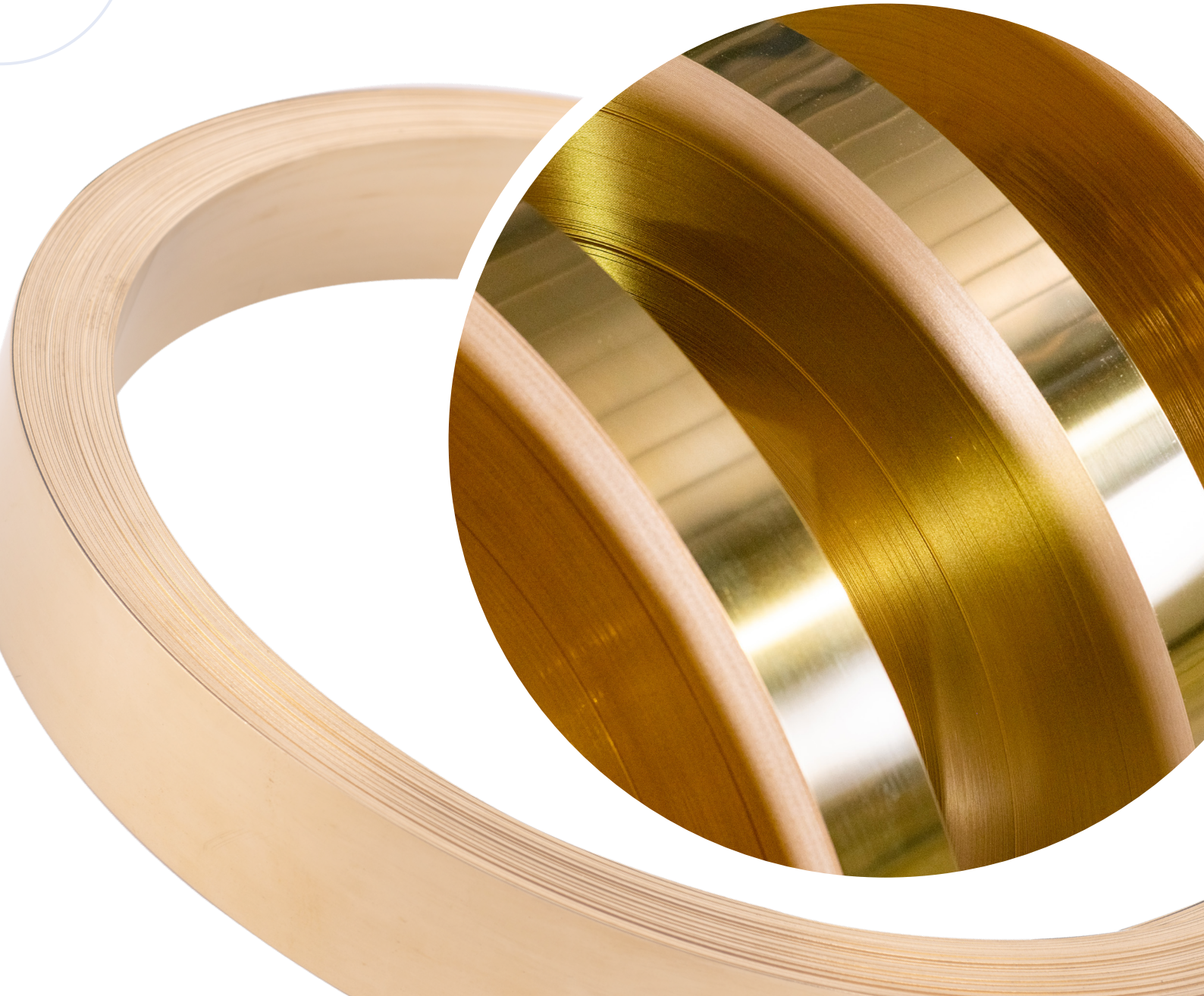
DULICO®

Copper & Copper Alloy



DULICO MANUFACTURING & TRADING

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COPPER & COPPER ALLOY

VISION

Dulico aspires to become the leading enterprise in the field of copper material production and mechanical processing in Vietnam.

MISSION

Providing high-quality copper materials and mechanical parts.
Recycling and circulating copper materials.
Self-sufficient copper materials for Vietnam.

CORE VALUES

Mind: Working wholeheartedly, responsibly.
Studious: Keeping the desire to learn and improve.
Integrity: Maintaining integrity.
Saving: Using resources sparingly, minimizing waste for society.
Humanity: Love and help each other at work.

Director
Mr. Nguyen Trong Duy

Dear Valued Partners,
Dulico is proud to be a pioneer in localizing and producing brass strips, contributing to proactively supplying raw materials for domestic copper coil enterprises. With our relentless efforts, we will continue to invest in research and development to expand our copper alloy portfolio, while promoting the export of copper components and materials with higher added value to the global market. Thereby, Dulico not only wants to create more jobs but also contribute to bringing foreign currency to the country.
With a strategy focusing on people, quality and a win-win mindset, we look forward to cooperating with our Partners for a common prosperity. We believe that, together, we will achieve greater success and sustainable development.

Business Philosophy

We build up a solid team of wholeheartedly, responsible and highly disciplined people and a working environment which focuses on fairness, friendliness and everyone has space to grow and develop himself.

Compassion - Wisdom - Integrity - Thrift - Kindness

ABOUT DULICO

Company name: **MANUFACTURING & TRADING DULICO COMPANY LIMITED**
Founded: **1991**
Representative: **Mr. Nguyen Trong Duy**
Factory investment: **10.000.000 USD**
Company capital: **2.100.000 USD**
Employee: **120 people (May 2024)**
Area: **24.000 m²**

Headquarter & Factory 1: Lot A2, CN7, Tu Liem Industrial Cluster, Xuan Phuong Ward, Hanoi, Vietnam

Factory 2: Lot 37, Quang Minh Industrial Park, Quang Minh Commune, Hanoi, Vietnam

www.dulico.vn
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WHAT WE DO?

- Casting and rolling of the brass strip, plate and rods.
- Trading other types of brass strips.
- Producing stamping parts OEM & ODM on various metals.
- Producing lock parts: core, body, lock, key, cover, hinge, etc.
- Machining products with CNC lathe technology.

Since 1991

WHY DULICO?

- Knowhow and long experience in metal processing
- Closed processing from copper scrap to end products
- High-quality products with the appropriate price, fast delivery time.

CERTIFICATES & ACHIEVEMENTS

ISO 9001:2015
ISO 14001:2015
ISO 45001: 2018

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự do - Hạnh phúc

ỦY BAN NHÂN DÂN THÀNH PHỐ HÀ NỘI

CHỨNG NHẬN
CERTIFICATE

TOP 10 SẢN PHẨM CÔNG NGHIỆP CHỦ LỰC THÀNH PHỐ HÀ NỘI NĂM 2023
TOP 10 HANOI MAJOR INDUSTRIAL PRODUCTS 2023

Đối với sản phẩm:
Đồng dát cuộn

CÔNG TY TNHH SẢN XUẤT VÀ THƯƠNG MẠI DULICO
Lô A2, CN 7, Cụm CN Tử Liêm, Quận Nam Từ Liêm, thành phố Hà Nội

Thời hạn chứng nhận là 12 tháng kể từ ngày cấp Giấy chứng nhận

Hà Nội, ngày 28 tháng 12 năm 2023
TM. ỦY BAN NHÂN DÂN
KT. CHỦ TỊCH
PHÓ CHỦ TỊCH
Nguyễn Mạnh Quyền

Quyết định số 6235/QĐ-UBND ngày 12 tháng 12 năm 2023

Top 10 key industrial products of Hanoi City 2023

EXPORT

Currently, Dulico brand brass strips products have been exported to **Canada, Japan** and many other countries in the world.

Affiliated Organizations & Associations

KEIEIJUKU VIETNAM · HAMI · VASI · Jcci · J-GoodTech · JETRO · JICA

Main Partner

VIET-TIEP · LiOA · SOPOKA · CAMCO · Panasonic · VINAKIP

BRASS STRIPS

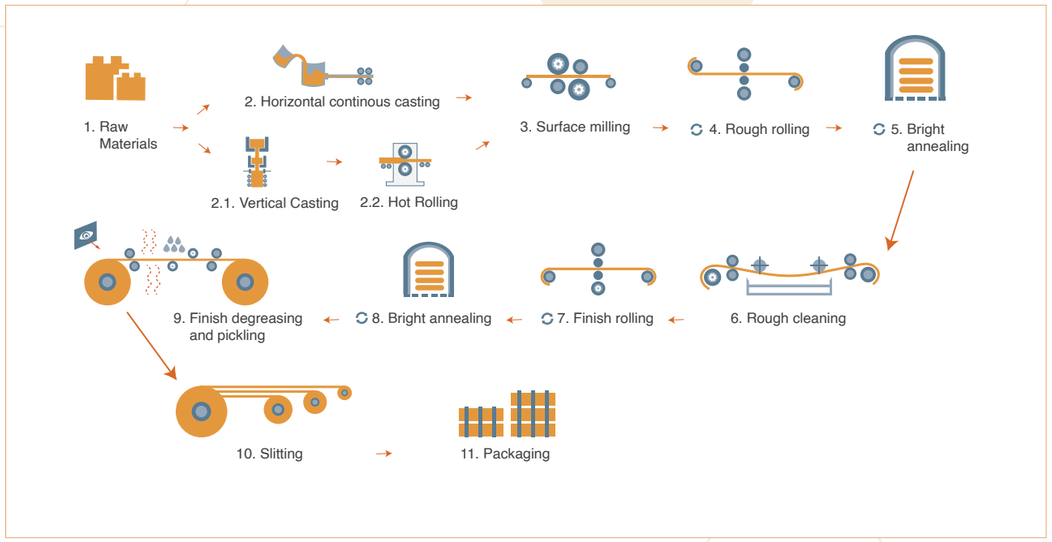
MACHINERY & EQUIPMENT	QUANTITY
Casting Line – China	3
Surface Milling Line – China	1
Rough & Finish Rolling Line – China	2
Surface Cleaning Line – China	2
Copper Annealing Furnace – China	2
Splitting Line – China	2

QC Inspection

Copper Analyzer – Spectro – Germany	1
HV Hardness Analyzer – FUTURE-TECH – Japan	1
HRB Hardness Analyzer – China	1
Roughness Analyzer – Mitutoyo – Japan	1
Electronic Tensile Strength Testing Machine – China	1
Panme – Mitutoyo – Japan	10
Caliper – Mitutoyo – Japan	30
Automatic Copper Strip Thickness Gauge – China	2

MACHINERY & EQUIPMENT

PRODUCTION PROCESS



BRASS STRIPS

Brass strips have common properties of good electrical and thermal conductivity, ductility, and high durability. Dulico's brass strip is also produced through a strict quality control process. This ensures that the product always has straightness, accurate thickness tolerance, uniform hardness, and clean, bright surface quality.

APPLICATIONS

- Household electricity
- Electronics
- Industrial electricity
- Automobiles
- Construction materials

QUALITY CERTIFICATE

Dulico's brass strips products meet the international copper standard C2801, C2680 component testing standards and ROHS cleanliness standards.

ISO 9001:2015 | ISO 14001:2015 | ISO 45001: 2018

ASTM INTERNATIONAL Standards Worldwide | JIS H3100 | RoHS compliant

Alloy Grade Cross-Reference Table

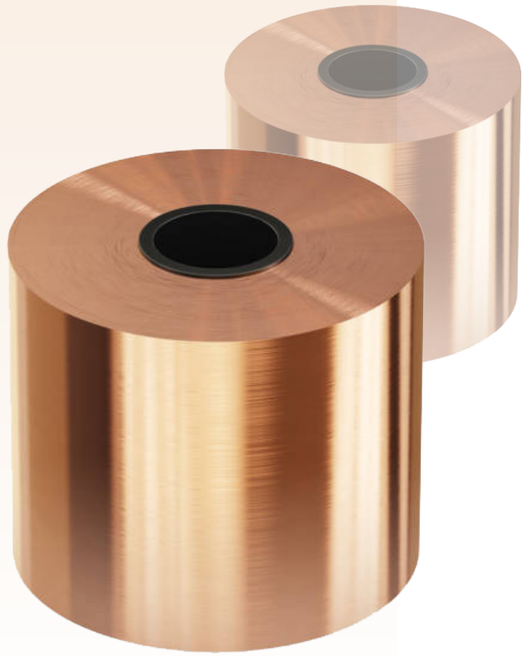
Japan	USA		UK / EU	Germany		China
JIS	ASTM	CDA	EN	DIN	Werkstoff Number	GB
C2400	C24000	CDA240	CW503L	CuZn20	2.0240	H80
C2600	C26000	CDA260	CW505L	CuZn30	2.0265	H70
C2680	C26800	CDA268	CW506L	CuZn33	2.0280	H68
C2720	C27200	CDA272	CW508L	CuZn37	2.0321	H63
C2801	C28000	CDA280	CW509L	CuZn40	2.0360	H62/H59

Chemical Composition

Alloy Grade		Chemical Composition					Dimensional Specifications	
JIS	DIN	Copper (%)	Zinc (%)	Lead (%)	Iron (%)	Impurities	Thickness	Width
C2400	CuZn20	78.5 – 81.5	Remain	≤0.05	≤0.05	≤0.3	0.2-10 mm (0.0079–0.3937 in)	6 – 450 mm (0.236–17.717 in)
C2600	CuZn30	68.5 – 71.5	Remain	≤0.05	≤0.05	≤0.3		
C2680	CuZn33	64.0 – 68.0	Remain	≤0.05	≤0.05	≤0.3		
C2720	CuZn37	62.0 – 64.0	Remain	≤0.07	≤0.07	≤0.3		
C2801	CuZn40	59.0 – 62.0	Remain	≤0.10	≤0.07	≤0.3		

Physical & Mechanical Properties

JIS	DIN	Temper	Vickers Hardness (HV)	Elongation (%)	Tensile Strength (MPa)	Bending Angle
C2400	CuZn20	O	–	≥44	≥255	180°
		1/4H	–	≥30	295–375	180°
		1/2H	–	≥25	325–400	180°
		H	–	–	≥375	180°
C2600	CuZn30	O	–	≥35	≥275	180°
		1/4H	75–125	≥30	325–420	180°
		1/2H	85–145	≥23	355–450	180° or W
		3/4H	95–160	≥10	375–490	180° or W
		H	105–175	–	410–540	180° or W
		EH	145–195	–	520–620	–
		SH	165–215	–	570–670	–
C2680	CuZn33	O	–	≥35	≥275	180°
		1/4H	75–125	≥30	325–410	180°
		1/2H	85–145	≥28	355–440	180° or W
		3/4H	95–165	≥10	375–490	180° or W
		H	105–175	–	410–540	180° or W
		EH	145–195	–	520–620	–
		SH	165–215	–	570–670	–
		ESH	≥180	–	≥620	–
C2720	CuZn37	O	–	≥40	≥275	180°
		1/4H	75–125	≥35	325–410	180°
		1/2H	85–145	≥28	355–440	180°
		H	≥130	–	≥470	90°
C2801	CuZn40	O	–	≥35	≥325	180°
		1/4H	85–145	≥35	355–440	180°
		1/2H	105–160	≥15	410–490	180°
		H	≥130	–	≥440	90°



COPPER STRIPS

Copper strip or copper leaf is copper containing at least 99.90% copper.

PROPERTIES

Copper strip is easy to process, weld, plate and has high anti-corrosion. In addition to outstanding properties such as high stability, excellent electrical conductivity, Dulico's copper products are also produced through a strict quality control process to ensure the indexes of thickness, uniform hardness, smooth surface, flat copper strip, no warping or sagging.

APPLICATIONS

Copper strip is widely used in many different industries, especially in the electrical and electronics industry.

Standards of DULICO's Copper strips

Alloy Grade					Chemical Composition				Dimensional Specifications	
JIS	ASTM	EN	DIN	GB	Cu (%)	Oxy (%)	Phospho (%)	Impurities	Thickness	Width
C1020	C10200	CW008A	OF-Cu	TU1	≥99.96	≤0.001	–	–	0.2-10 mm (0.0079–0.3937 in)	6 – 450 mm (0.236–17.717 in)
C1100	C11000	CW004A	E-Cu	T2	≥99.90	≤0.04	–	–		
C1220	C12200	CW024A	SF-Cu	TP2	≥99.90	–	0.015-0.04	–		

Physical & Mechanical Properties

JIS	DIN	Temper	Vickers Hardness (HV)	Elongation (%)	Tensile Strength (MPa)	Bending Angle
C1020	OF-Cu	O	≤ 60	≥ 35	195 – 255	180°
		1/4H	55 – 100	≥ 20	215 – 285	180°
		1/2H	75 – 120	≥ 10	235 – 315	180°
		H	≥ 80	–	275 – 345	–
C1100	E-Cu	O	≤ 60	≥ 35	195 – 255	180°
		1/4H	55 – 100	≥ 20	215 – 285	180°
		1/2H	75 – 120	≥ 10	235 – 315	180°
		H	≥ 80	–	275 – 345	–
C1220	SF-Cu	O	≤ 60	≥ 35	195 – 255	180°
		1/4H	55 – 100	≥ 20	215 – 285	180°
		1/2H	75 – 120	≥ 10	235 – 315	180°
		H	≥ 80	–	275 – 345	-

QUALITY MANAGEMENT

The goal of the quality control process at DULICO is to ensure that no defective products reach the customers.
We comply with ISO 9001 standards for quality management, from the assessment and screening of input materials to the production stages. Copper in the furnace is analyzed by German Spectro spectrometer; thickness tolerance is checked by modern AGC thickness gauge; hardness is measured by Japanese HV analyzer; copper surface and color fastness are strictly controlled by roughness analyzer and salt spray equipment.

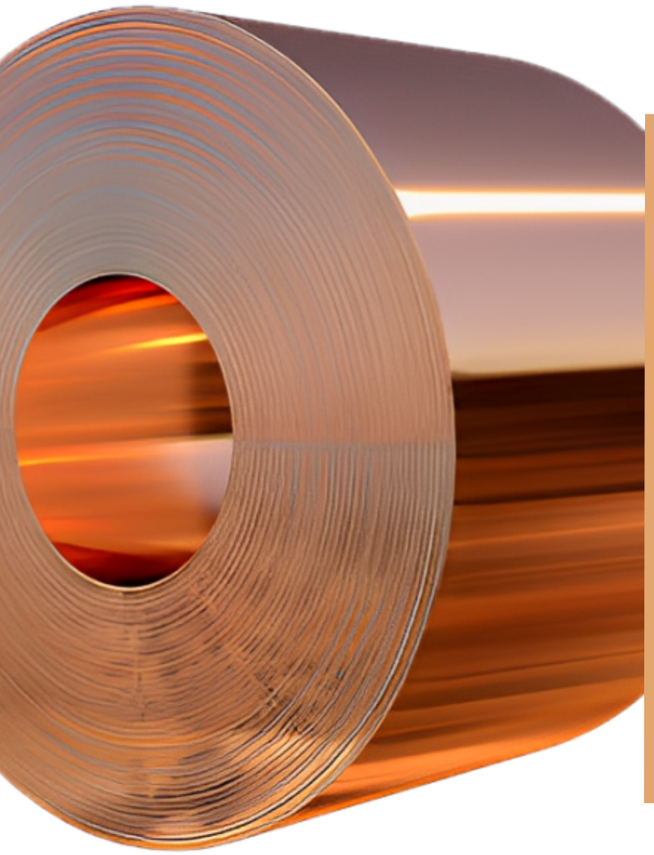
Quality management equipment

COMMERCIALS PRODUCTS

TIN PHOSPHOR BRONZE STRIP

LEAD FRAME STRIP

NICKEL SILVER BRONZE STRIP



TIN PHOSPHOR BRONZE STRIP

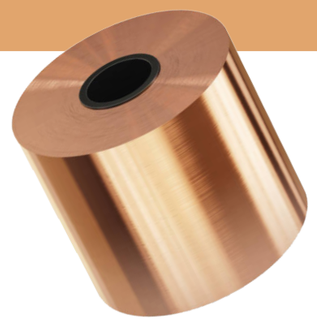
Tin phosphor bronze strip is an alloy of copper containing phosphorus, tin and copper.

PROPERTIES

Tin phosphor bronze strip has excellent machinability, high strength, high elasticity and superior corrosion resistance compared to other copper alloys.

APPLICATIONS

Tin phosphor bronze strip is widely used in personal computers, telephones, and household electrical appliances.



Standards of Tin phosphor bronze strip

Alloy code	Chemical composition (%)							Hardness (H)	Size	
	Cu	Sn	Fe	Ni	P	Zn	Other		Length	Width
C5191	Remain	5.5 - 7.0	-	-	0.03 - 0.35	-	Cu+Sn+P ≥99.5	H/4;H/2;H	0.10-3.00mm (0.0039 – 0.1181 in)	20-600mm (0.7874 – 23.6220 in)
C5210	Remain	7.0 - 9.0	-	-	0.03 - 0.35	-	Cu+Sn+P ≥99.5	H/4;H/2;H		
C5071	Remain	1.7 - 2.3	0.05 - 0.15	-	0.02 - 0.08	-	Cu+Sn+Fe+P ≥99.7	H/4;H/2;H		
C5111	Remain	3.5 - 4.9	-	-	0.03 - 0.35	-	Cu+Sn+P ≥99.5	H/4;H/2;H		
C41110	89.0 - 93.0	0.3 - 0.9	-	-	-	Remain	Pb ≤ 0.05	H/2;3/4H		
C44500	70.0 - 73.0	0.8 - 1.2	-	-	-	Remain	As: 0.02 - 0.06	1/2H;3/4H;H;EH;SH		

NICKEL SILVER BRONZE STRIP

Nickel silver bronze strip is an alloy containing copper, zinc and nickel.

PROPERTIES

In addition to the common properties of copper such as electrical conductivity, thermal conductivity, and high ductility, nickel silver bronze strip also has good anti-corrosion, mechanical properties, antibacterial properties, and good radiation protection.

APPLICATIONS

Nickel silver bronze strip is widely used in applications such as internal shielding in mobile phones or in crystal oscillators. Nickel silver bronze strips are often used to form conductive shields around circuit boards, chips and antennas, preventing interference from external sources and ensuring the correct operation of communication systems.

Standards of Nickel silver bronze strip

Alloy code	Chemical composition (%)								Size	
	Cu	Pb	Fe	Ni+Co	Mn	Zn	Other	Hardness (H)	Length	Width
C7701	54.0 - 58.0	≤0.03	≤0.25	16.5 - 19.5	≤0.50	Remain	Cu + Ni + Zn ≥ 99.5	O;H/4;H/2;H;EH;SH	0.15-3.00mm (0.0059 – 0.1181 in)	20-400mm (0.7874 – 15.7480 in)
C7521	62.0 - 66.0	≤0.03	≤0.25	16.5 - 19.5	≤0.50	Remain	Cu + Ni + Zn ≥ 99.5	O;H/4;H/2;H;EH;SH		
C7351	70.0 - 75.0	≤0.03	≤0.25	8.5 - 11.0	≤0.50	Remain	Cu + Ni + Zn ≥ 99.5	O;H/4;H/2;H		

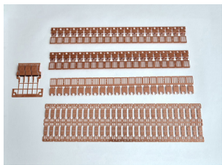
LEAD FRAME STRIP

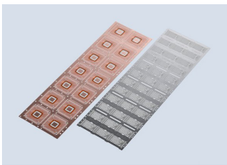
BASIC PROPERTIES

Copper Lead Frames is a copper alloy with many outstanding advantages in terms of electrical conductivity, mechanical strength, machinability, corrosion resistance and thermal stability.

APPLICATIONS

Copper lead frames are widely used in the electronics and electrical industries, especially in the production of lead frames and integrated circuit components.





Standards of Lead frame strip

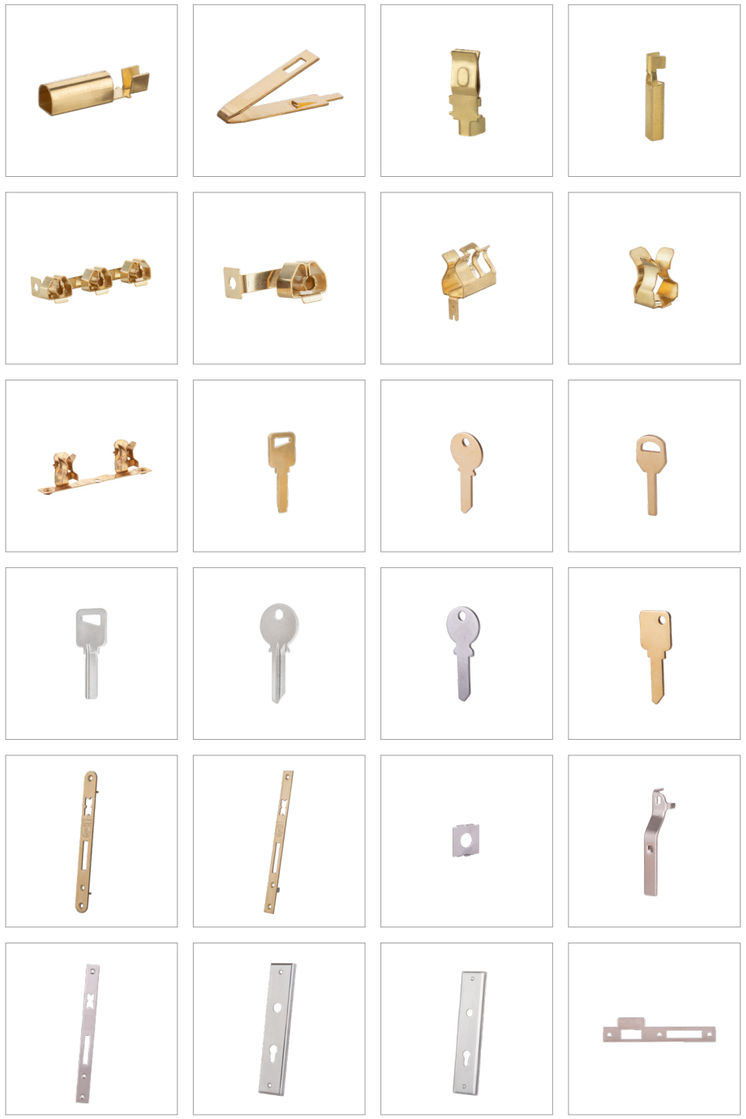
Alloy code	Chemical composition (%)						
	Pb	Fe	Sn	Zn	P	Cu	Hardness (H)
C1921	-	0.05-0.15	-	-	0.025 - 0.04	Remain	O; 1/2H; H; EH; SH
C1940	≤ 0.03	2.1-2.6	-	0.05-0.20	0.015 - 0.15	Remain	O; 1/2H; H; EH; SH

MECHANICAL PROCESSING

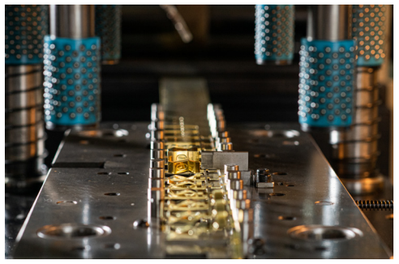
MACHINERY & EQUIPMENT	QUALITY
Stamping	
Stamping machine from 10 – 260 T - Taiwan/Japan	30
Stamping machine 60 T with automatic feeder - Komatsu - Japan	1
Stamping machine 80 T with automatic feeder - Komatsu - Japan	3
Stamping machine 260 T with automatic feeder - Chinfong - Taiwan	1
CNC	
CNC Lathering - Taiwan/China	7
Surface Treatment	
Sanding and Felt Polishing Machine	10
Automatic Hinge Polishing Machine	2
Water Abrasive Surface Treatment Machine	1
Mold & Die Machining Equipment	
Mechanical lathe - Japan	2
Mechanical milling machine - Japan	3
Wire EDM Machine - Japan	1
3-Axis automatic surface grinding machine - Japan	3
Wire cutting machine - China	2
CNC Milling Machine - China	1
CNC Start-hole drilling machine - China	1
QC inspection	
Caliper - Mitutoyo - Japan	30
Panme - Mitutoyo - Japan	10
2D measuring machine - Taiwan	1
Salt spray machine - China	1

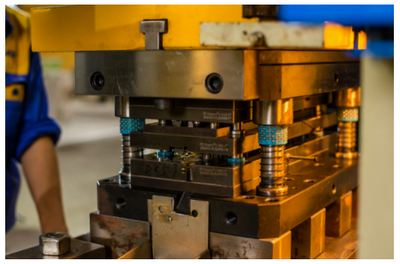
STAMPING

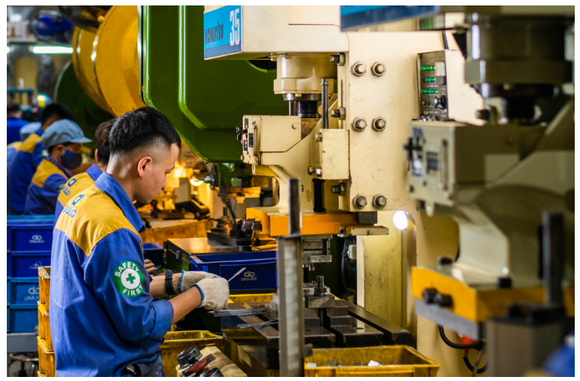
With the proactive source of brass strips materials, Dulico has a huge advantage in the stamping and punching of copper parts. In addition, Dulico also stamps on different materials, based on the drawings and requirements of customers.



IMAGES
MACHINERY & FACTORY







COPPER & BRASS FITTINGS

From the source of copper material cast at the factory, Dulico directly processes CNC lathes at competitive costs. Dulico's copper parts have conquered customers in the Japanese market.

HINGE

Dulico specializes in manufacturing door hinges made of steel, stainless steel, and copper. As a long-term partner of famous lock and door brands in Vietnam, we produce a variety of different hinges.

QUALITY MANAGEMENT

The goal of the quality control process is to ensure that no defective products reach the customer. Dulico complies with ISO 9001 standards for quality management.
Input materials from suppliers are carefully evaluated and screened. Dulico strictly controls all stages of the production process and controls the final product.

PRODUCTION AND ORDERING PROCESS

Get drawings & sample products → Building production process → Design mold → Trial production → Mass production → Delivery

Thank you for your interest and trust in Dulico.
We hope to have the opportunity to cooperate with you in the future.

DULICO

MANUFACTURING & TRADING DULICO COMPANY LIMITED

Headquarter & Factory 1: Lot A2, CN7, Tu Liem Industrial Cluster, Xuan Phuong, Hanoi, Vietnam

Factory 2: Lot 37, Quang Minh Industrial Park, Quang Minh Commune, Hanoi, Vietnam

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