





### 宁波金田铜业(集团)股份有限公司 NINGBO JINTIAN COPPER(GROUP) CO.,LTD.

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金田铜带事业部 JINTIAN COPPER STRIP DIVISION



# 宁波金田铜业(集团)股份有限公司

SINCE 1986

**宁波金田铜业(集团)股份有限公司**始建于1986年, 是国内规模较大的知名铜加工企业。

公司产业涵盖铜加工、高新材料、建筑材料等领域,下辖二十几家子公司,铜合金板带、铜合金管、线、棒及漆包线、稀土钕铁硼永磁材料等主要产品产量均居行业前列。

公司设立了国家认定企业技术中心、国家级博士后 科研工作站和国家认可实验室,主持参与多项国家及行 业标准制定,凭借先进的铜精深加工技术,获得省级以 上科技进步奖10余项。公司注重环境保护和生态建设, 强化精益管理及品质提升,获得浙江省首批雄鹰行动培育企业、浙江省创新型试点企业、浙江省转型升级引领示范企业、宁波市首批千亿级工业龙头培育企业等荣誉称号,被评为国家级绿色工厂、全国守合同、重信用单位、全国模范劳动关系和协企业、全国模范职工之家、省级文明单位、AAA级资信企业。



**Ningbo Jintian Copper (Group) Co., Ltd.,** established in 1986, is a large-scale Chinese copper processing enterprise.

JINTIAN

The company's main business areas include copper processing, high-tech materials and building materials. Jintian Copper has more than twenty production and trade -oriented subsidiaries. The main products include copper & copper alloy wires, bars, tubes, strips, plates, enameled wires, valves and magnetic materials, among others. The production volumes of all main products rank among the top in the industry.

The company has established a National-level Enterprise Technology Center, a National-level Accredited Laboratory, and has received a National-level Post-doctoral Workplace status. Jintian Copper has participated in the formulation of a number of national and industry standards. With its self-developed & advanced copper processing technology,

Jintian has won more than 10 scientific and technological progress awards. The company pays attention to environmental protection and ecological construction, is dedicated to lean management approach and quality improvement, and has received the Leading Heroic Enterprise of Zhejiang Province, Innovation Pilot Enterprise of Zhejiang Province, Leading Model Enterprise in Transformation and Upgrading and the 100 Billion Value -creating Industrial Leaders of Ningbo honorary titles. In addition, Jintian Group has received numerous other honors and awards including National-level Environmentally Friendly Manufacturer, National-level Contract-Honoring and Promise-Keeping Unit, National-level Model Harmonious Labor Relations Enterprise, National-level Model Workers' Home, Provincial-level Civilized Organization and AAA credit rated enterprise.



JINTIAN COPPER STRIP 01 JINTIAN COPPER STRIP 02





## 金田铜带事业部

SINCE 1993

金田高精度铜带事业部成立于1993年

系宁波金田铜业(集团)股份有限公司铜带材生产、经营主体 拥有国际一流的高精度铜带生产车间和智能化生产装备

在"创造客户价值,打造百年公司,成为行业标杆,为中国工业强国做贡献"的使命愿景牵引下,金田铜带秉承 "天天求变、永不自满、勇于竞争、追求卓越"的企业精神,坚持走循环经济和新型工业化和谐发展道路,拥有一 流的管理水平和人才队伍,全面通过ISO9001:2015质量管理体系、ISO14001:2015环境体系及OHSAS18001:2007 职业健康安全管理等体系认证,引进了德国、日本、美国等国家先进的制造设备和检测仪器,建成了多条现代化水 平连铸和半连铸生产线。

20多年的发展与沉淀,金田铜带已成为国内先进的铜带材深精加工制造基地,专注于各种高精度铜带材的研发与 生产,位列中国铜带材企业前列。金田铜带产品高精度锡磷青铜带、紫铜带、黄铜带和锌白铜带,符合欧盟ROHS指 令要求,主要应用于电子、电气、通讯、网络、机械五金、建筑和家电等行业,畅销国内各省市,远销韩国、日本、 香港、以及东南亚等国家和地区。随着650项目的投产,我们将重点布局5G、新能源汽车、通讯、消费电子、高端 医疗设备等应用领域,为客户提供性能更稳定的高强、高导精密铜合金带材。

面向未来,金田铜带继续坚持"依法经营、诚信经商、自主创新、科学发展"的经营理念,讲质量、守诚信、铸 品牌,以市场为导向,以客户为中心,坚持科技兴企,加快升级,优化产品结构,提升产品品质,致力成为国内铜合 金带材制造行业的标杆,为实现"世界级500强"的金田梦而不懈奋斗!



### 金田铜带 / JINTIAN COPPER STRIP

## **IINTIAN COPPER STRIP DIVISION**

SINCE 1993

lintian Copper Strip Division, established in 1993, is the operation unit of Ningbo lintian Copper (Group) Co., Ltd. that produces copper strips. Jintian Copper Strip has first-class high-precision copper strip production workshops and intelligent production equipment.

By following the company's mission - "Create customer value, Build a century-old company, Become a benchmark in the industry, Contribute to China's industrial growth" and the enterprise spirit of - "Seek change everyday, Never be self-satisfied, Dare to compete, Pursue excellence", Jintian Copper Strip promotes circular economy and modern industrialization. Moreover, Jintian Copper Strip has first-class management and operational teams. Jintian Copper Strip has passed ISO9001:2015 quality management system, ISO14001:2015 environmental management system and OHSAS18001:2007 occupational health and safety management system certifications. Jintian Copper Strip has imported advanced manufacturing equipment and testing instruments from Germany, Japan, the United States and other countries, and has built a number of modern horizontal continuous casting and semi-continuous casting production lines.

Over the past 20 years, Jintian Copper (Group) Company has become an advanced copper plate & strip processing and manufacturing base in China, focusing on the development and production of high-precision copper plates and strips. Jintian Copper Strip ranks among the forefront of Chinese copper strip enterprises. Jintian Copper Strip products include various High Precision Tin Phosphor Bronze Strips, High Precision Copper Strips, High Precision Brass Strips and High Precision Nickel Silver Strips, which comply with the requirements of the EU ROHS standard. Our products are mainly applied in electronics, electric, communication, network, mechanical hardware, construction and household appliances manufacturing industries, among others. The products are sold widely in domestic provinces and cities, and exported to South Korea, Japan, Hong Kong, Southeast Asia and other countries and regions. Our copper strip division has started a new project for developing copper strips with a maximum width of 650mm. In the future, we will pay importance to developing products and projects in the areas of deployment of 5G, new energy automobile, telecommunication, consumer electronics and high-tech medical equipment, providing customers with more stable, high-strength and high-conductivity precision copper alloy strips.

In the years to come, lintian Copper Strip will continue to follow its business philosophy of "Operate according to law, Do business with integrity, Innovate independently, and Contribute to scientific development". In addition, the company is committed to becoming the benchmark for the domestic copper alloy strip manufacturing industry and is constantly working towards the dream of Jintian Copper to become one of Global 500 companies through quality, integrity, brand building, market-oriented & customer-centric attitude, relying on science & technology, accelerating transformation & upgrading, optimizing product structure and improving product quality.

JINTIAN COPPER STRIP 03 JINTIAN COPPER STRIP 04



## 科研资质

- ◇ 国家认定企业技术中心
- ◇ 国家级博士后科研工作站
- ◇ 宁波市院士工作站
- ◇ 获得CNAS国家实验室认可
- ◇ 获得省级以上科技进步奖10余项
- ◇ 承担国家科技支撑项目和国家火炬计划项目13项
- ◇ 公司共有研发技术人员465人(其中博士、硕士及高级工程师22名)



# 管理体系

- ◇ 通过质量、环境、职业健康安全、测量、知识产权等管理体系认证
- ◇ 获得7项产品认证: JIS、AS/NIS、 PED、UL、AD、ASTMB
- ◇ 国内首家通过JISH3110标准的铜加工企业
- ◇ 省内首家通过ISO45001迁移认证的企业
- ◇ 获得国际权威资信机构——邓白氏注册
- ◇ 全面应用6S生产质量管理体系









## **RESEARCH QUALIFICATIONS**

- ♦ National-level Enterprise Technology Center
- ♦ National Postdoctoral Research Station
- ♦ Ningbo Academician Workstation
- ♦ CNAS National-level Post-doctoral Workplace
- $\diamond$  Received more than 10 provincial and national-level scientific and technological progress awards
- $\diamond$  Has undertaken 13 national science and technology projects and national-level torch program projects
- ♦ 465 R&D technicians (22 doctors, masters and senior engineers)

### **MANAGEMENT SYSTEM**

- Passed management system certifications of quality, environment, occupational health & safety,
   measurement and intellectual property
- $\diamondsuit$  JIS, AS / NIS, PED, UL, AD
- ♦ The first copper processing enterprise in China that passed the JISH3110 standard
- ♦ The first company in zhejiang province to pass the new ISO45001 certification
- ♦ Obtained the international authoritative credit agency D & B registration
- ♦ Fully applied 6S production site management system





## 技术研发

坚持走技术兴企之路,先后设立了国家认定企业技术中心、国家级博士后科研工作站及国家级实验室,聘用德国、日本、韩国等国多位专家人才,全职引进乌克兰国家研究院院士团队,并建立企业院士科研工作站。持续深化与北京有色金属研究院、中南大学、浙江大学等多家外部著名科研机构的合作关系,建立了以市场为导向、产学研用紧密融合的企业技术创新体系。引入IPD产品开发体系,提升产品竞争力。我司先后取得国家专利208项,主持(参与)行业标准制定28项。

## 智能制造

金田铜业将智能化作为企业转型升级的重要抓手,于2017年成立智能制造研究院,与SAP、HONEYWELL、兮易强企、汉得科技等国内外知名的智能制造服务公司深度合作,先后引进CRM、WMS、MES、SCADA等先进信息化系统。从精益化、自动化、信息化三方面入手,推动公司数字化车间建设,以打造无人化工厂为目标不断推进信息化与自动化的深度融合与应用。









### **R&D**

Technological development is the key for Jintian Copper's business success. We have been recognized nation-wide for our R&D efforts and have received several prestigious titles, including Nationally Accredited Enterprise Technology Center, National-level Post-doctoral Workplace and Nationally Accredited Laboratory, among others. Our company has invited experts from Germany, Japan & Korea and a team of scientists from the National Academy of Sciences of Ukraine to train our personnel and build a great workplace for scientists. Jintian cooperates with many famous scientific research institutions, such as Beijing General Research Institute for Nonferrous Metals, Central South University and Zhejiang University, and aims to establish a comprehensive R&D system, which intergrades science and industrial application. We utilize Integrated Product Development (IPD) system to enhance product competitiveness. Our company has successively obtained 208 national patents and participated in the formulation of 28 industry standards.

### **INTELLIGENT MANUFACTURING**

Jintian Copper regards intelligence as an important starting point for the transformation and upgrading of enterprises. In 2017, we established the Intelligent Manufacturing Research Institute and cooperate with SAP, HONEYWELL, Xiyiqiangqi, HAND Technology and other well-known domestic and foreign intelligent manufacturing service companies. Jintian Copper utilizes advanced information systems such as CRM, WMS, MES and SCADA. 1. Lean 2. Automation and 3. Informatization are the three areas, in which we base the construction of our digital workshops on. With a deep integration of automated and intelligent systems, we are constructing unmanned production facilities.









# 产品检测

### 金田铜带配备了完善的检测实验设备,确保产品质量的可靠性。主要的检测设备有:

- ◇ 直读光谱仪 (美国)
- ◇ ICP光谱仪(法国)
- ◇ X射线荧光能谱仪(美国)
- ◇ 布. 洛. 维氏硬度计
- ◇ 电子万能试验机
- ◇ 金相显微镜(德国)
- ◇ 自动磨抛机(丹麦







### **PRODUCT TESTING**

lintian Copper Strip is equipped with a complete testing equipment system to ensure product quality.

Main testing machines include:

- ♦ Direct Reading Spectrometer (USA)
- ♦ ICP Spectrometer (France
- ♦ X-ray Fluorescence Spectrometer (USA)
- Cloth, Rockwell, Vickers Hardness Tester
- ♦ Electronic Universal Testing Machine
- Microscope (Germany
- Automatic Grinding and Polishing Machine (Denmark)













# 生产设备

金田铜带投资新建了650项目,该项目拥有高精度、高效率的现代化进口专业生产设备,从国外引进了完善的生产体系,生产制造能力处于世界同行领先水平。







# **PRODUCTION EQUIPMENT**



Jintian Copper Strip has invested in a new project for producing wide copper strips (650mm). For this project, we have imported high-precision and highly effective professional and modern production equipment. The full production system has been acquired from abroad. Our overall production capacity is at the very top of global rankings.







JINTIAN COPPER STRIP 11 JINTIAN COPPER STRIP 12







# 高精度锡磷青铜带 - C5071

High Precision Tin Phosphor Bronze Strip

良好的冷加工性能、良好的电镀、热浸镀及焊接性能,高强度、高弹性,耐海水及工艺气氛腐蚀

Excellent cold workability, electroplating, hot dip plating and welding performance; high strength, elasticity and resistance to seawater and process atmosphere corrosion.

### 牌号、化学成分 Alloy Designation, Chemical Composition

牌号 (Alloy designation)					化学成分 (Chemical Composition)					
	国标GB	美国UNS	欧洲EN	日本JIS	铜(Cu) %	锡(Sn) %	磷(P) %			
	QSn1.8	C50700	CuSn1.8	C5071	余量(Rem.)	1.7-2.3	≤0.15			

#### 物理性能、加工性能 Physical properties, fabrication properties

	ity Electrical conductivity Thermal conductivity Modulus of elasticity Specific heat $M/M$ Modulus of elasticity $M/M$ Specific heat $M/M$ Thermal $M/M$ Specific heat $M/M$ Sp					加工性能 (Fabrication properties)				
密度 Desity g/cm³	Electrical conductivity	Thermal conductivity	Modulus of elasticity	Specific heat	热膨胀系数 Thermal expansion coefficien 10 <sup>6</sup> /K	冷加工 Cold-workability	切削性能 Machinability	电镀性能 Electric plating property	热浸镀锡 Hot dip tin plating property	焊接 Weldability
8.88	30	155	124	0.375	17	优秀 Excellent	一般 General	很好 Excellent	很好 Excellent	良好 Good

#### 机械性能 Mechanical properties

			机械性能 (Mechanical prope	erties)			
状态	维氏硬度HV	拉伸试验(7	Tension test)	弯曲性能 (Bend properties)			
Temper	Hardness	抗拉强度MPa Tensile strength	延伸率% Elongation	厚度mm Thickness	弯曲角度 Bend angle	弯曲半径 Bend radius	
060	-	≥315	≥30	-	180°	贴合	
H02	125-165	410-510	≥10	0.1-0.5	180° 或 W	厚度*2倍	
H04	150-185	490-590	≥5	0.1-0.5	100. 就 M	厚度*4倍	
H06	150-205	540-635	≥2	0.05-0.5		厚度*6倍	
H08	≥185	610-705	-	-	-	-	

典型应用

广泛运用于计算机CPU插槽、汽车端子、手机按键、电子连接器等高科技电子领域 Widely used in high-tech electronic fields such as computer CPU sockets, car terminals, mobile phone buttons, electronic connectors, etc.







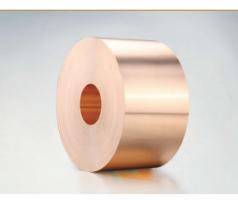
# 高精度锡磷青铜带 - C5111

High Precision Tin Phosphor Bronze Strip

良好的冷加工性能、良好的电镀、热浸镀及焊接性能,高强度、高弹性,耐海水及工艺气氛腐蚀

JINTIAN"

Excellent cold workability, electroplating, hot dip plating and welding performance; high strength, elasticity and resistance to seawater and process atmosphere corrosion.



牌号、化学成分 | Alloy Designation, Chemical Composition

	牌号 (Alloy o	lesignation)		化学成分 (Chemical Composition)			
国标GB	美国UNS	欧洲EN	日本JIS	铜(Cu) %	锡(Sn) %	磷(P) %	
QSn4-0.3	C51100	CuSn4	C5111	余量(Rem.)	3.5-4.9	0.03-0.35	

#### 物理性能、加工性能 Physical properties, fabrication properties

	Electrical conductivity Thermal conductivity Modulus of elasticity Specific heat W/(m.K) GPa J/(g.K) Thermal coeffici					加工性能 (Fabrication properties)				
密度 Desity g/cm³	Electrical conductivity	Thermal conductivity	Modulus of elasticity	Specific heat	热膨胀系数 Thermal expansion coefficien 10%/K	冷加工 Cold-workability	切削性能 Machinability	电镀性能 Electric plating property	热浸镀锡 Hot dip tin plating property	焊接 Weldability
8.86	18	84	117	0.377	17.8	很好 Excellent	不太合适 Less suitable	很好 Excellent	很好 Excellent	好 Good

#### 机械性能 Jechanical properties

			机械性能 (Mechanical prope	erties)			
状态	维氏硬度HV	拉伸试验(7	Tension test)	弯曲性能 (Bend properties)			
Temper	Hardness	抗拉强度MPa Tensile strength	延伸率% Elongation	厚度mm Thickness	弯曲角度 Bend angle	弯曲半径 Bend radius	
060	-	≥295	≥38			贴合	
H01	80-150	345-440	≥25	< 1.6	180° 或 W	厚度*0.5倍	
H02	12-180	410-510	≥12	< 1.0	100 ±% W	厚度*1倍	
H04	150-200	490-590	≥7			厚度*2倍	
H06	170-220	570-660	≥3	-	-	-	

典型应用







广泛运用于计算机CPU插槽、汽车端子、手机按键、电子连接器等高科技电子领域 Widely used in high-tech electronic fields such as computer CPU sockets, car terminals, mobile phone buttons, electronic connectors, etc.







# 高精度锡磷青铜带 - C5191

High Precision Tin Phosphor Bronze Strip

良好的冷加工性能、良好的电镀、热浸镀及焊接性能,高强度、高弹性,耐海水及工艺气氛腐蚀

Excellent cold workability, electroplating, hot dip plating and welding performance; high strength, elasticity and resistance to seawater and process atmosphere corrosion.

### 牌号、化学成分 Alloy Designation, Chemical Composition

	牌号 (Alloy o	designation)		化学成分	分 (Chemical Compo	osition)
国标GB	美国UNS	欧洲EN	日本JIS	铜+银(Cu+Ag) %	锡(Sn) %	磷(P) %
QSn6.5-0.1	C51900	CuSn6	C5191	余量(Rem.)	6.0-7.0	0.10-0.25

#### 物理性能、加工性能 Physical properties, fabrication properties

			加工性能 (Fabrication properties)								
密度 Desity g/cm³	导电率 Electrical conductivity %IACS	导热率 Thermal conductivity W/(m.K)	弹性模量 Modulus of elasticity GPa	比热 Specific heat J/(g.K)	热膨胀系数 Thermal expansion coefficien 10 <sup>6</sup> /K	冷加工 Cold -workability	热加工 Hot -workability	切削性能 Machinability	Electric plating	热浸镀锡 Hot dip tin plating property	焊接 Weldability
8.83	13	67	112	0.377	18	很好 Excellent	有限 Limited	不太合适 Less suitable	很好 Excellent	很好 Excellent	好 Good

# 机械性能

				机械	性能 (Mecha	anical prope	erties)				
状态	维氏硬度HV		高	精度青铜带	ħ		微晶产品				
Temper	Hardness	抗拉强度MPa Tensile strength	延伸率% Elongation	厚度mm Thickness	弯曲角度 Bend angle	弯曲半径 Bend radius	抗拉强度MPa Tensile strength	延伸率% Elongation	厚度mm Thickness	弯曲角度 Bend angle	弯曲半径 Bend radius
060	≤120	≥315	≥40			厚度*0.5倍	-	-	-		厚度*0.5倍
H01	110-155	390-510	≥35	< 1.6	180° 或 W	厚度*1倍	-	-	-	180° 或 W	厚度*1倍
H02	150-190	490-610	≥10			厚度*1.5倍	-	-	-		厚度*1.5倍
H04	180-230	590-690	≥8			厚度*2倍	560-650	≥10	0.1-0.5		厚度*2倍
H06	200-240	635-720	≥5	-	-	-	≥610	≥5	0.1-0.5	-	-

典型应用

广泛运用于计算机CPU插槽、汽车端子、手机按键、电子连接器等高科技电子领域 Widely used in high-tech electronic fields such as computer CPU sockets, car terminals, mobile phone buttons, electronic connectors, etc.







# 高精度锡磷青铜带 - C5210

High Precision Tin Phosphor Bronze Strip

良好的冷加工性能、良好的电镀、热浸镀及焊接性能,高强度、高弹性,耐海水及工艺气氛腐蚀

Excellent cold workability, electroplating, hot dip plating and welding performance; high strength, elasticity and resistance to seawater and process atmosphere corrosion.



牌号、化学成分 Alloy Designation, Chemical Composition

	牌号 (Alloy o	designation)		化学成分 (Chemical Composition)				
国标GB	美国UNS	欧洲EN	日本JIS	铜+银(Cu+Ag) %	锡(Sn) %	磷(P) %		
QSn8-0.3	C52100	CuSn8	C5210	余量(Rem.)	7.0-9.0	0.03-0.35		

# 物理性能、加工性能 Physical properties, fabrication properties

	Electrical conductivity Thermal conductivity Modulus of elasticity Specific heat W/(m.K) GPa J/(g.K) Thermal conductivity GPa					加工性能 (Fabrication properties)				
密度 Desity g/cm³	Electrical conductivity	Thermal conductivity	Modulus of elasticity	Specific heat	热膨胀系数 Thermal expansion coefficien 10%/K	冷加工 Cold-workability	切削性能 Machinability	电镀性能 Electric plating property	热浸镀锡 Hot dip tin plating property	焊接 Weldability
8.8	12	63	107	0.377	18.2	很好 Excellent	不太合适 Less suitable	很好 Excellent	很好 Excellent	好 Good

#### 机械性能 lechanical properties

				机械	性能 (Mecha	anical prope	erties)				
状态	维氏硬度HV		高	精度青铜带	Ī		微晶产品				
Temper	Hardness	抗拉强度MPa Tensile strength	延伸率% Elongation	厚度mm Thickness	弯曲角度 Bend angle	弯曲半径 Bend radius	抗拉强度MPa Tensile strength	屈服强度MPa Yield strength	延伸率% Elongation	弯曲角度 Bend angle	弯曲半径 Bend radius
H01	100-160	390-510	≥40			厚度*0.5倍	390-510	-	-		-
H02	150-205	490-610	≥30		180°或W	厚度*1倍	470-610	-	-	180° 或 W	-
H04	180-235	590-705	≥12	< 1.6	.00 👊	厚度*1.5倍	590-705	≥530	≥20		厚度*1倍
H06	210-250	685-785	≥5			厚度*3倍	685-785	≥620	≥11		厚度*2.5倍
H08	≥230	≥735	-	-	-	-	735-830	≥700	≥9	-	厚度*3倍

典型应用 vnical application





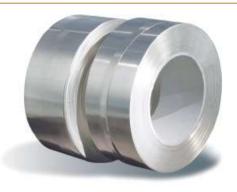


广泛运用于计算机CPU插槽、汽车端子、手机按键、电子连接器等高科技电子领域 Widely used in high-tech electronic fields such as computer CPU sockets, car terminals, mobile phone buttons, electronic connectors, etc.

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# 高精度锌白铜板带 - C7521

High Precision Nickel Silver Strip

良好的冷热加工性能、良好的电镀、热浸镀及焊接性能,高强度、高弹性,耐腐蚀、耐疲劳、屏蔽等性能

Good cold and hot processing performance, good electroplating, ho dip plating and welding performance, high strength, high elasticity corrosion resistance, fatigue resistance, shielding and other properties

#### 牌号、化学成分 Alloy Designation, Chemical Composition

	牌号 (Alloy o	designation)		化学成分 (Chemical Composition)				
国标GB 美国UNS		欧洲EN	日本JIS	铜(Cu) %	镍(Ni) %	锌(Zn) %		
BZn18-17	C75200	CuNi18Zn20	C7521	62-66	16.5-19.5	余量(Rem.)		

#### 物理性能、加工性能 Physical properties, fabrication properties

		物理性能 (Phy	sical propertie		加工性能 (Fabrication properties)						
密度 Desity g/cm³	导电率 Electrical conductivity %IACS	导热率 Thermal conductivity W/(m.K)	弹性模量 Modulus of elasticity GPa	比热 Specific heat J/(g.K)	热膨胀系数 Thermal expansion coefficien 10 <sup>6</sup> /K	冷热加工 Cold hot -workability	切削性能 Machinability	Electric plating	热浸镀锡 Hot dip tin plating property	焊接 Weldability	耐腐蚀 Corrosion
8.73	6	33	125	0.38	16.2	很好 Excellent	适合 Suitable	很好 Excellent	很好 Excellent	好 Good	很好 Excellent

#### 机械性能 Mechanical properties

		机械性	能 (Mechanical prope	rties)						
状态	维氏硬度HV	担	並伸试验(Tension test)		弯曲性 厚度mm Thickness < 1.6	生能 (Bend properties)				
Temper	Hardness	抗拉强度MPa Tensile strength	屈服强度MPa Yield strength	延伸率% Elongation		弯曲角度 Bend angle	弯曲半径 Bend radius			
060	-	≥375	-	≥20			贴合			
H02	120-180	440-570	-	≥5	< 1.6	180°或W	厚度*1倍			
H04	150-210	540-640	-	≥3			厚度*2倍			

### 典型应用

Typical applicatio

广泛运用于制造在潮湿和腐蚀介质中工作的结构件、弹性元件、精密仪器、通讯工业、液晶体振荡元件外壳、医疗器械、建筑、管乐器和食具及日用品方面

Widely used in the manufacture of structural parts, elastic components, precision instruments, communication industry, liquid crystal oscillator component shells, medical devices, construction, wind instruments and tableware and daily necessities working in wet and corrosive media







# 高精度锌白铜板带 - C7701

High Precision Nickel Silver Strip

良好的冷热加工性能、良好的电镀、热浸镀及焊接性能,高强度、 高弹性,耐腐蚀、耐疲劳、屏蔽等性能

Good cold and hot processing performance, good electroplating, ho dip plating and welding performance, high strength, high elasticity corrosion resistance, fatigue resistance, shielding and other propertie



牌号、化学成分 Alloy Designation, Chemical Composition

	牌号 (Alloy o	designation)		化学成分 (Chemical Composition)				
国标GB	美国UNS	欧洲EN	日本JIS	铜(Cu) %	镍(Ni) %	锌(Zn) %		
BZn18-26	C77000	CuNi18Zn27	C7701	53.5-56.5	16.5-19.5	余量(Rem.)		

# 物理性能、加工性能 Physical properties, fabrication properties

		物理性能 (Phy	sical properties	5)		加工性能 (Fabrication properties)					
密度 Desity g/cm³	导电率 Electrical conductivity %IACS	导热率 Thermal conductivity W/(m.K)	弹性模量 Modulus of elasticity GPa	比热 Specific heat J/(g.K)	热膨胀系数 Thermal expansion coefficien 10%K	冷热加工 Cold hot -workability	切削性能 Machinability	Electric plating	热浸镀锡 Hot dip tin plating property	焊接 Weldability	耐腐蚀 Corrosion
8.7	5.5	29	125	0.38	16.7	很好 Excellent	适合 Suitable	很好 Excellent	很好 Excellent	好 Good	很好 Excellent

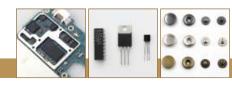
#### 机械性能 echanical properties

	机械性能 (Mechanical properties)									
状态	维氏硬度HV	拉	伸试验(Tension test)	弯曲性能 (Bend properties)						
Temper	Hardness	抗拉强度MPa Tensile strength	屈服强度MPa Yield strength	延伸率% Elongation	厚度mm Thickness	弯曲角度 Bend angle	弯曲半径 Bend radius			
H02	150-210	540-655	-	≥8		1000 -	厚度*1.5倍			
H04	180-240	630-735	-	≥4	< 1.6	180° 或 W	厚度*2倍			
H06	210-260	705-805	-	-		90°	厚度*3倍			

#### 典型应用 pical application

广泛运用于制造在潮湿和腐蚀介质中工作的结构件、弹性元件、精密仪器、通讯工业、液晶体振荡元件外壳、医疗器械、建筑、管乐器和食具及日用品方面

Widely used in the manufacture of structural parts, elastic components, precision instruments, communication industry, liquid crystal oscillator component shells, medical devices, construction, wind instruments and tableware and daily necessities working in wet and corrosive media



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# 高精度黄铜带 - C2680

High Precision Brass Strip

色泽均匀,良好的加工性、延展性及深冲性,易于电镀或涂装, 良好的耐蚀性,焊接性佳

Uniform color, excellent processability and elongation, excellent deep drawing capabilities; easy to electroplate or paint on excellent corrosion resistance and weldability

#### 牌号、化学成分 Alloy Designation, Chemical Composition

	牌号 (Alloy o	designation)		化学成分 (Chemical Composition)				
国标GB	美国UNS	欧洲EN	日本JIS	铜(Cu) %	锌(Zn) %	铅(Pb) %		
H65	-	-	C2680	64-68	余量(Rem.)	≤0.01		

#### 物理性能、加工性能 Physical properties, fabrication properties

			加工性能 (Fabrication properties)								
密度 Desity g/cm³	导电率 Electrical conductivity %IACS	导热率 Thermal conductivity W/(m.K)	弹性模量 Modulus of elasticity GPa	比热 Specific heat J/(g.K)	热膨胀系数 Thermal expansion coefficien 10°/K	冷热加工 Cold hot -workability	切削性能 Machinability	Electric plating	热浸镀锡 Hot dip tin plating property	焊接 Weldability	耐腐蚀 Corrosion
8.5	25	116	103	0.377	20.3	很好 Excellent	适合 Suitable	很好 Excellent	很好 Excellent	好 Good	很好 Excellent

# 机械性能 Mechanical properties

		;	机械性能 (Mechanic	al properties)			
状态	维氏硬度HV		弯曲性能 (Bend properties)				
1A763 Temper		抗拉强度MPa Tensile strength	屈服强度MPa Yield strength	延伸率% Elongation	厚度mm Thickness	弯曲角度 Bend angle	弯曲半径 Bend radius
060	-	≥275	-	≥35			贴合
H01	75-125	325-420	-	≥30			厚度*0.5倍
H02	85-145	355-450	-	≥25	< 2.0	180° 或 W	厚度*1倍
H04	105-175	410-540	-	≥15		100 30 11	厚度*1.5倍
H06	145-195	520-620	-	-			-
H08	165-215	570-670	-	-	-		-

## 典型应用

用于电子元件、开关插座、建筑蚀刻件、挡风条、紧固件,铭牌、标签、冷凝及热交换器,五金制品以及服饰、刻度盘、口红盒等

Used for electronic components, switch sockets, building etchings, windshields, fasteners, nameplates, labels, condenser and heat exchangers, hardware products and clothing, dials, lipstick cases and etc









High Precision Brass Strip

色泽均匀,良好的加工性、延展性及深冲性,易于电镀或涂装, 良好的耐蚀性,焊接性佳

JINTIAN

Uniform color, excellent processability and elongation, excellent deep drawing capabilities; easy to electroplate or paint on;

excellent corrosion resistance and weldabilit



牌号、化学成分

	牌号 (Alloy o	designation)	化学成分 (Chemical Composition)				
国标GB	国标GB 美国UNS		日本JIS	铜(Cu) %	锌(Zn) %	铅(Pb) %	
H70	-	-	C2600	68.5-71.5	余量(Rem.)	≤0.01	

#### 物理性能、加工性能 Physical properties, fabrication properties

		物理性能 (Phy	sical properties	5)		加工性能 (Fabrication properties)					
密度 Desity g/cm³	导电率 Electrical conductivity %IACS	导热率 Thermal conductivity W/(m.K)	弹性模量 Modulus of elasticity GPa	比热 Specific heat J/(g.K)	热膨胀系数 Thermal expansion coefficien 10%K	冷热加工 Cold hot -workability	切削性能 Machinability	Electric plating	热浸镀锡 Hot dip tin plating property	焊接 Weldability	耐腐蚀 Corrosion
8.5	26	120	110	0.377	19.9	很好 Excellent	适合 Suitable	很好 Excellent	很好 Excellent	好 Good	很好 Excellent

#### 机械性能 Jechanical properties

	机械性能 (Mechanical properties)											
状态	维氏硬度HV		弯曲性能 (Bend properties)									
Temper	Hardness	抗拉强度MPa Tensile strength	屈服强度MPa Yield strength	延伸率% Elongation	厚度mm Thickness	弯曲角度 Bend angle	弯曲半径 Bend radius					
060	-	≥275	-	≥35			贴合					
H01	75-125	325-420	-	≥30			厚度*0.5倍					
H02	85-145	355-450	-	≥25	< 2.0	180° 或 W	厚度*1倍					
H04	105-175	410-540	-	-		100 2011	厚度*1.5倍					
H06	145-195	520-620	-	-			-					
H08	165-215	570-670	-	-	-		-					

#### 典型应用 ivnical application





用于电子元件、开关插座、建筑蚀刻件、挡风条、紧固件,铭牌、标签、冷凝及热交换 器,五金制品以及服饰、刻度盘、口红盒等

Used for electronic components, switch sockets, building etchings, windshields, fasteners, nameplates, labels, condenser and heat exchangers, hardware products and clothing, dials, lipstick cases and etc

JINTIAN COPPER STRIP 21 JINTIAN COPPER STRIP 22





# 高精度黄铜带 - C2801

High Precision Brass Strip

色泽均匀,良好的加工性、延展性及深冲性,易于电镀或涂装, 良好的耐蚀性,焊接性佳

Uniform color, excellent processability and elongation, excellent deep drawing capabilities; easy to electroplate or paint on; excellent corrosion resistance and weldability

#### 牌号、化学成分

Alloy Designation, Chemical Composition

	牌号 (Alloy o	designation)		化学成:	分 (Chemical Compo	osition)
国标GB	美国UNS	欧洲EN	日本JIS	铜(Cu) %	锌(Zn) %	铅(Pb) %
H62	-	-	C2801	60.5-63.5	余量(Rem.)	≤0.02

#### 物理性能、加工性能

Physical properties, fabrication properties

		物理性能 (Phy	sical properties	5)		加工性能 (Fabrication properties)					
密度 Desity g/cm³	导电率 Electrical conductivity %IACS	导热率 Thermal conductivity W/(m.K)	弹性模量 Modulus of elasticity GPa	比热 Specific heat J/(g.K)	热膨胀系数 Thermal expansion coefficien 10%/K	冷热加工 Cold hot -workability	切削性能 Machinability	Electric plating	热浸镀锡 Hot dip tin plating property	焊接 Weldability	耐腐蚀 Corrosion
8.5	24	116	103	0.377	20.3	很好 Excellent	适合 Suitable	很好 Excellent	很好 Excellent	好 Good	很好 Excellent

#### 机械性能

Mechanical properties

		7	机械性能 (Mechanic	al properties)			
状态	维氏硬度HV		拉伸试验(Tension	test)	弯曲	曲性能 (Bend pro	perties)
Temper	Hardness	抗拉强度MPa Tensile strength	屈服强度MPa Yield strength	延伸率% Elongation	厚度mm Thickness	弯曲角度 Bend angle	弯曲半径 Bend radius
060	≤95	≥290	-	≥35			贴合
H02	90-130	350-470	-	≥20	≥2.0	180°	厚度*1倍
H04	125-165	410-630	-	≥10	22.0	100	厚度*1.5倍
H06	≥155	≥585	-	≥2.5			-

### 典型应用

Typical application

用于电子元件、开关插座、建筑蚀刻件、挡风条、紧固件,铭牌、标签、冷凝及热交换器,五金制品以及服饰、刻度盘、口红盒等

Used for electronic components, switch sockets, building etchings, windshields, fasteners, nameplates, labels, condenser and heat exchangers, hardware products and clothing, dials, lipstick cases and etc







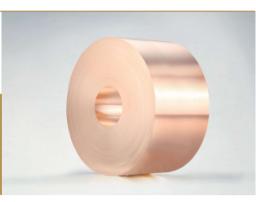


High Precision Copper Strip

具有优异的导热导电性能,冷热加工性能优良、可以进行焊接和 钎焊、耐腐蚀性能良好

JINTIAN

Has excellent thermal and electrical conductivity, excellent hot and cold processing performance, can be welded and brazed, and has good corrosion resistance



牌号、化学成分 Alloy Designation, Chemical Composition

牌号 (Alloy o	designation)	化学成分 (Chemical Composition)						
国标GB	日本JIS	铜+银(Cu+Ag) %	磷(P) %	铁(Fe) %	镍(Ni) %	铅(Pb) %		
TU1	C1020	≥99.97	≤0.002	≤0.004	≤0.001	≤0.003		

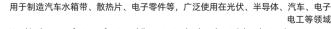
# 物理性能、加工性能 Physical properties fabrication properties

		物理性能 (Phys	sical properties	5)		加工性能 (Fabrication properties)					
密度 Desity g/cm³	导电率 Electrical conductivity %IACS	导热率 Thermal conductivity W/(m.K)	弹性模量 Modulus of elasticity GPa	比热 Specific heat J/(g.K)	热膨胀系数 Thermal expansion coefficien 10 <sup>6</sup> /K	冷热加工 Cold hot -workability				焊接 Weldability	耐腐蚀 Corrosion
8.83	≥98	385	117	0.385	18	很好 Excellent	适合 Suitable	很好 Excellent	很好 Excellent	好 Good	很好 Excellent

#### 机械性能 echanical properties

#### 机械性能 (Mechanical properties) 弯曲性能 (Bend properties) 拉伸试验(Tension test) 杯突值 状态 维氏硬度HV Hardness 抗拉强度MPa 屈服强度MPa 延伸率% 弯曲角度 弯曲半径 Elongation Tensile strenath Yield strenath Bend angle Bend radius 060 ≤70 ≥195 ≥30 贴合 ≥7.5 60-95 215-295 ≥25 ≥7.0 180° 245-345 厚度\*1倍 H02 80-110 ≥8 ≥5.5 H04 90-120 295-395 厚度\*1.5倍 ≥3

# 典型应用



Used in the manufacture of automobile water tank tubes, heat sinks, electronic parts, etc., widely used in photovoltaic, semiconductor, automotive, electronic and electrical fields













# 高精度紫铜带 - C1100

High Precision Copper Strip

具有优异的导热导电性能,冷热加工性能优良、可以进行焊接和 钎焊、耐腐蚀性能良好

Has excellent thermal and electrical conductivity, excellent hot and cold processing performance, can be welded and brazed, and has good corrosion resistance

### 牌号、化学成分 Alloy Designation, Chemical Composition

牌号 (Alloy o	designation)		化学成分 (Chemical Composition)					
国标GB	日本JIS	铜+银(Cu+Ag) %	磷(P) %	铁(Fe) %	镍(Ni) %	铅(Pb) %		
T2	C1100	≥99.90	-	≤0.005	≤0.005	≤0.005		

#### 物理性能、加工性能 Physical properties, fabrication properties

		物理性能 (Phy	sical propertie	s)			加工性能 (Fabrication properties)				
密度 Desity g/cm³	导电率 Electrical conductivity %IACS	导热率 Thermal conductivity W/(m.K)	弹性模量 Modulus of elasticity GPa	比热 Specific heat J/(g.K)	热膨胀系数 Thermal expansion coefficien 10%K	冷热加工 Cold hot -workability	切削性能 Machinability	Electric plating	热浸镀锡 Hot dip tin plating property	焊接 Weldability	耐腐蚀 Corrosion
8.83	≥98	385	117	0.385	18	很好 Excellent	适合 Suitable	很好 Excellent	很好 Excellent	好 Good	很好 Excellent

#### 机械性能 Mechanical propertie

		机械性	能 (Mechanical prope	rties)			
状态	维氏硬度HV	拉	如此证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证		弯曲性能 (Ben	nd properties)	杯突值
<b>化心</b> Temper	年氏硬度 TV Hardness	抗拉强度MPa Tensile strength	屈服强度MPa Yield strength	延伸率% Elongation	弯曲角度 Bend angle	弯曲半径 Bend radius	IE/mm
060	≤70	≥195	-	≥30		贴合	≥7.5
H01	> 60-95	215-295	-	≥25	180° 或 W	厚度*0.5倍	≥7.0
H02	> 80-110	245-345	-	≥8		厚度*1倍	≥5.5
H04	> 90-120	295-395	-	≥3		厚度*2倍	-

## 典型应用

用于制造汽车水箱管、散热片、电子零件等,广泛使用在光伏、半导体、汽车、电子 电工等领域

Used in the manufacture of automobile water tank tubes, heat sinks, electronic parts, etc., widely used in photovoltaic, semiconductor, automotive, electronic and electrical fields





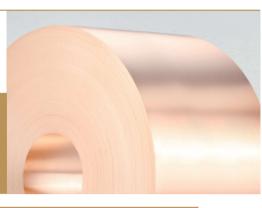


# 高精度紫铜带 - C1220

High Precision Copper Strip

具有优异的导热导电性能,冷热加工性能优良、可以进行焊接和 钎焊、耐腐蚀性能良好

Has excellent thermal and electrical conductivity, excellent hot and cold processing performance, can be welded and brazed, and has good corrosion resistance



牌号、化学成分 Alloy Designation, Chemical Composition

牌号 (Alloy o	designation)	化学成分 (Chemical Composition)						
国标GB	日本JIS	铜+银(Cu+Ag) %	磷(P) %	铁(Fe) %	镍(Ni) %	铅(Pb) %		
TP2	C1220	≥99.90	0.015-0.04	≤0.05	≤0.01	≤0.005		

#### 物理性能、加工性能 Physical properties, fabrication properties

		物理性能 (Phy	sical properties	5)		加工性能 (Fabrication properties)					
密度 Desity g/cm³	导电率 Electrical conductivity %IACS	导热率 Thermal conductivity W/(m.K)	弹性模量 Modulus of elasticity GPa	比热 Specific heat J/(g.K)	热膨胀系数 Thermal expansion coefficien 10%K	冷热加工 Cold hot -workability	切削性能 Machinability	Electric plating	热浸镀锡 Hot dip tin plating property	焊接 Weldability	耐腐蚀 Corrosion
8.8	≥89	360	116	0.385	17.4	很好 Excellent	适合 Suitable	很好 Excellent	很好 Excellent	好 Good	很好 Excellent

#### 机械性能 lechanical properties

		机械性	能 (Mechanical prope	rties)			
状态	维氏硬度HV	拉	如此证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证证		弯曲性能 (Ben	d properties)	杯突值
1A/03 Temper	年氏便及TV Hardness	抗拉强度MPa Tensile strength	屈服强度MPa Yield strength	延伸率% Elongation	弯曲角度 Bend angle	弯曲半径 Bend radius	IE/mm
060	≤70	≥195	-	≥30		贴合	≥7.5
H01	> 60-95	215-295	-	≥25	180° 或 W	厚度*0.5倍	≥7.0
H02	>80-110	245-345	-	≥8		厚度*1倍	≥5.5
H04	> 90-120	295-395	-	≥3		厚度*2倍	-

# 典型应用



用于制造汽车水箱带、散热片、电子零件等,广泛使用在光伏、半导体、汽车、电子 电工等领域

Used in the manufacture of automobile water tank tubes, heat sinks, electronic parts, etc., widely used in photovoltaic, semiconductor, automotive, electronic and electrical fields



# 合作客户

### **MAIN PARTNERS**

20多年的发展与沉淀,公司已与电子、电气、 通讯、网络、机械五金、建筑和家电等领域的诸多 行业龙头建立长久稳定的合作关系,例如:国家电 网、中航光电、正泰、林内等国内外知名企业。

公司投资建立的650高精铜带生产线,将进一步提升了金田铜带的各项性能和指标,着力于5G、新能源汽车、通讯、消费电子、高端医疗设备等客户提供高强、高导、高稳定性的铜合金带材。

Over the past 20 years, our company has established long-term and stable cooperative relations with many industry leaders in the fields of electronics, electric, communications, network, mechanical hardware, construction and household appliance manufacturing industries; including STATE GRID, JONHON, CHINT, RINNAI and other well-known enterprises all over the world.

The new high-precision copper strip production line (strip max width 650mm project) invested by Jintian Copper Strip division will further improve the performance and indicators of Jintian Copper Strip products. Jintian Copper Strip division focuses on providing copper strips of high strength, high conductivity and high stability for 5G, new energy vehicles, telecommunications, consumer electronics, high-tech medical equipment and other industries.

## 服务理念

公司坚持以客户为中心,以一体化全方位的服务为导向,一直追求和优质客户的长期合作,在客户服务方面,我们建立了24小时人工服务热线,限时反馈制度,和团队服务制度,负责产品的生产、研发经理也均与大客户建立直线联系,真正做到快速响应,全过程服务。每年我们还定期开展满意度调查,通过不断回访客户,真正了解客户需求,解决客户问题,不断提升我们的服务质量。因为客户的信任和肯定,是我们金田不竭的动力。

在未来的发展中,公司沿着"管理现代化、运营数字化、发展规模化、运作资本化"的发展之路,坚持"依法经营、诚信经商、自主创新、科学发展",持续优化产业布局和产品结构,不断创新发展模式,为继续服务于全球制造业,提供品质一流、种类齐全的高精度铜合金带材。

## **SERVICE PHILOSOPHY**

Jintian Copper is customer-centric and service-oriented at the core. We have always pursued long-term cooperation with high-quality customers. To improve our customer service, we have established a 24-hour service hotline, a time-limited feedback system, and a service team system. The production and R & D managers have also established straight-line contact with major customers, truly achieving rapid response and a full-process service.

Every year we also carry out regular satisfaction surveys; through continuous visits to customers, we truly understand customer needs, solve customer problems, and continuously improve our service quality. The trust and affirmation of customers are our inexhaustible sources of motivation. In the future, our company follows the path of "modernization of management, digitalization of operation, scale of development and capitalization of operation", and adheres to the principles of "Operate in accordance with the law, Do business with integrity, Innovate independently and Scientific development". We are devoted to continuously optimize our industrial layout and product structure, and constantly innovate and develop, in order to continue to serve the global manufacturing industry and provide first-class and complete high-precision copper alloy strip products.



合作 共创 互赢

TEAMWORK CO-CREATION

WIN-WIN





## 打造全球先进的铜加工产业基地

CREATING A HIGHLY-ADVANCED MANUFACTURING BASE FOR COPPER PROCESSING





使命愿景:**创造客户价值,打造百年公司** 成为行业标杆,为中国工业强国做贡献

MISSION & VISION: CREATE CUSTOMER VALUE TO BUILDING A CENTURY-OLD ENTERPRISE, BECOMING THE BENCHMARK OF THE INDUSTRY. CONTRIBUTING TO CHINA'S INDUSTRIAL POWER

企业精神:天天求变,永不自满,勇于竞争,追求卓越

CORPORATE SPIRIT: SEEK CHANGE EVERYDAY, NEVER BE SELF-SATISFIED, DARE TO INNOVATE, PURSUE EXCELLENCE

核心价值观: 学习、团队、诚信、责任、开放

CORE VALUES: LEARNING TEAM INTEGRITY RESPONSIBILITY OPEN

企业哲学: **大道至简, 千锤百炼** 

CORPORATE PHILOSOPHY. SIMPLIFY COMPLEXITY REPETITION CREATES THE MASTER

质量观念:**没有质量就没有一切** 

OLIALITY CONCEPT: WITHOUT OLIALITY THERE'S NOTHING

企业与员工: 相**互尊重、互为伙伴、彼此成就** 

ENTERPRISE AND EMPLOYEES: MUTUAL RESPECT, MUTUAL PARTNERS, MUTUAL ACHIEVEMEN

JINTIAN COPPER STRIP 29 JINTIAN COPPER STRIP 30