



CABLE MATERIALS
CATALOG

DEAR BUSINESS PARTNERS,

ZION COMMUNICATION is a professional signal products and security system products provider. We believe on investing and building strong R&D capabilities for new technology and innovation. We have a strong R&D team and skilled workers, also with the advanced machines and modern factories which can provide our customers with outstanding quality, service. Our company keep on investing other factories and build up strong cooperation with other companies too to provide whole products and systems in signal field and security systems to satisfy customers orders inquire.

ZION COMMUNICATION 's management and international sales teams are committed to our customers' utmost satisfaction. Our experienced team experts strives to service every inquiry, quote, and order quickly and efficiently, meeting and often exceeding customers' expectations.

ZION COMMUNICATION is keep on developing in healthy and reasonable speed, and welcome to be partners of us.

Best wishes,

A handwritten signature in black ink that reads "Michael". The signature is fluid and cursive, with a long vertical line extending downwards from the end of the name.

Michael Xsu

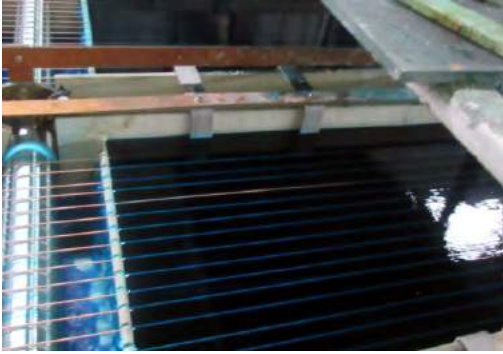
ZION
Communication
HELLOSIGNAL®



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Factory And Production Equipment



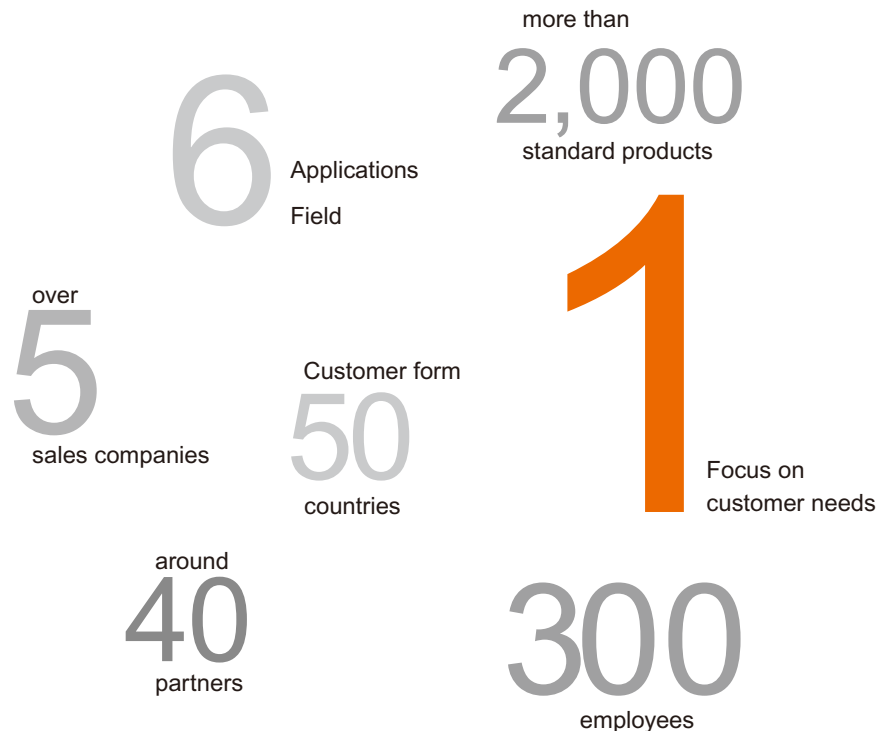
Quality Control

Consistent quality is the key to develop long-term business relationship; therefore ZION COMMUNICATION valued consistent quality throughout every phase of manufacturing process.

From raw materials to final products, we perform intense quality checks to maintain our product quality.



Since quality is the buzz word today & each customer/consumer wants it in totality. Our quality policy & work philosophy stresses towards total customer satisfaction. We have well defined interdepartmental as well as intra Departmental Network Blocks where complete monitoring of job works is done. A well trained staff/Dedicated sales /Excelled production force all strive continuously delivering better services to the customer. An ISO-9002 certification is an affidavit to it which consolidates our verdict for quality.





MAKING QUALITY A PRIORITY

Quality Control

A highlight of ZION COMMUNICATION is its emphasis on Quality Control, Quality Audit and Quality Assurance in the spheres of manufacturing activities and service, i.e. from RAW MATERIAL TO FINAL PRODUCTS to CUSTOMER SUPPORT SERVICES.

Electrolytic Copper & Aluminum ensures longer life for conductor. Bunching/twisting of ministrants as per international standards. Proper annealing gives softness & flexibility.

Insulation -grade PVC stands high temperatures.
Higher DI-electric strength insulation used.
Weather proof sheathing/insulation material.
Grease/Oil resistant properties.
Voltage fluctuations don't affect.
Resistant to fire hazards.
Self fire-extinguishing & flame proof cables.
Rigid quality controls conforms to-specification.
Chemicals and microbiological attacks don't affect.
No damage due to severe bending while laying.
Immune to fluctuations in temperatures.
Fire Insurance approved.

Description Design

Cable with Copper / Aluminium Conductors PVC insulated colour coded cores laid extruded PVC inner sheathed overall PVC sheathed armored / unarmored cables.

Tests

Testing is a very important part of cable manufacture and all raw materials and finished cables must be thoroughly tested to ensure the quality of cables. ZION COMMUNICATION has a well equipped test fields and electrical, mechanical and chemical laboratories capable of carrying out all tests which are required as per relevant specifications. The most modern testing equipment is installed in these laboratories.



CCA wire

is made up by using pure aluminum wire as core. It adopts the advanced coating and welding technology in the world. Plating copper concentrically on the concentric line of aluminum, realizes metallurgy combination between copper coating and aluminum. There will be no flaking off during the heat treatment or mechanical workout. The CCA is a best new bimetal wire instead of pure copper wire. Producible scope: the diameter is from $\Phi 01.0\text{mm}$ to $\Phi 3.00\text{mm}$.

Product Features: shiny & uniform copper layer, excellent electrical conductivity, bear bending, good tensile strength, excellent welding and corrosion, with the great light specific gravity, and savings resources of copper.

Main Application: flexible coaxial cable, a variety of audio and video cable, vehicle single cable, network cable, data transmission cables and so on. Can be used in the above cables: cable conductor, braiding and shielding, the single wire conductor and other conductors. Applicable to a variety of electronic components' lead wire, such as capacitors, resistors and so on.



Copper Clad Aluminum Wire

Nomial diameter Φ /mm	Diameter difference \pm mm	Resistivity (20°C) $\leq \Omega \cdot \text{km} / \text{mm}^2$	Measured resistance (20 °C) $\leq \Omega / \text{km}$	Copper content %	Density (20 °C)g / cm ³	conductivity (20 °C) $\geq \%$
0.1	0.003	27.5	3501	27	3.3	63
0.11	0.003	27.5	2893	27	3.3	63
0.12	0.003	27.5	2431	27	3.3	63
0.13	0.003	27.5	2071	27	3.3	63
0.14	0.003	27.5	1786	27	3.3	63
0.15	0.003	27.5	1556	27	3.3	63
0.16	0.003	27.5	1367	27	3.3	63
0.17	0.003	27.5	1211	27	3.3	63
0.18	0.003	27.5	1080	27	3.3	63
0.19	0.003	27.5	969	27	3.3	63
0.2	0.004	27.5	875	27	3.3	63
0.25	0.004	27.5	560	27	3.3	63
0.3	0.004	27.5	389	27	3.3	63
0.35	0.004	27.5	285	27	3.3	63
0.4	0.005	27.5	218	27	3.3	63
0.45	0.005	27.5	172	27	3.3	63
0.5	0.005	27.5	140	27	3.3	63
0.64	0.006	27.5	85.4	27	3.3	63
0.7	0.007	27.5	71.4	27	3.3	63
0.81	0.008	27.5	53.3	27	3.3	63
0.9	0.009	27.5	43.2	27	3.3	63
1.02	0.01	27.5	33.6	27	3.3	63
1.13	0.011	27.5	27.4	27	3.3	63
1.38	0.013	27.5	18.3	27	3.3	63
1.63	0.016	27.5	13.1	27	3.3	63
1.78	0.017	27.5	11	27	3.3	63
1.96	0.019	27.5	9.1	27	3.3	63

Copper Clad Aluminum Wire

Intensity test of the soft state \geq N	Tensile strength of soft-state \geq N / mm ²	soft-state elongation \geq %	Hard measured intensity \geq N	Tensile strength of hard-state \geq N / mm ²	Hard elongation \geq %
0.9	120	8	2.1	270	1
1.1	120	8	2.5	270	1
1.3	120	8	3	270	1
1.5	120	8	3.5	270	1
1.8	120	8	4.1	270	1
2.1	120	10	4.7	270	1
2.4	120	10	5.4	270	1
2.7	120	10	6.1	270	1
3	120	10	6.8	270	1
3.4	120	10	7.6	270	1
3.7	120	10	8.4	270	1
5.8	120	12	13	270	1
8.4	120	12	19	270	1
11	120	12	25	270	1
15	120	12	33	270	1
19	120	12	42	270	1
23	120	12	53	270	1
38	120	12	86	270	1
46	120	12	103	270	1
61	120	12	139	270	1
76	120	12	171	270	1
98	120	12	220	270	1
120	120	12	270	270	1
179	120	12	403	270	1
250	120	12	563	270	1
298	120	12	671	270	1
362	120	12	814	270	1

The above is just for reference, we can do as customer's order, the specifications of tinned above should be added by 0.06g / cm³ on the original ones.

Package size mm(reel)	Φ 105×120	Φ 125×120	Φ 185×180	Φ 250×200	Φ 400×280	Φ 500×340	Φ 600×340	Φ 800×560
Weight of wire per reel(kg)	1.2kg	1.7kg	4kg	14kg	52kg	105kg	170kg	

CCAM Wire

Copper clad aluminum wire is produced with the production process of cladding-welding- drawing method, by cladding planished copper stripe concentrically on the outer surface of the aluminium core, via several times of drawing and heat treatment, to meet customers' technical requirement on line diameter, mechanical property and electrical property. The copper clad aluminum wire characterizes by both the samll density of aluminum and the good conductivity of copper. This kind of bimetallic composite wire is suited for most electrical conductor applications. The processing method of CCA wire is similar to that of copper wire during cable manufacture.

CCAM Application

It can be extensively used in CATV signal transmission, HC communication network signal transmission, control signal cable, light vehicle cable, welding cable, urgent removal cable, TV exciting coil, deflecting coil, ballast coil and so on. In HF signal transmission, it is applied to: Standard Material of Conductor in CATV Coaxial Cable; 50 Ohm Radio Frequency Aerial; Leaky Cable; Soft Coaxial Radio Frequency Cable;

Data Cable In power transmission and LF signal transmission, it can be applied to: Twisted Pair Power Cable Control Cable Building. Cotton Covered Wire Busbar & Other Conductors In special electromagnetic wire, it can be applied to: Coils or windings in computers, mobile communication equipments, spaceflight & avigation and military industry instruments.

This product adopt the welding and stretching technique that enable the products with high strength, light weight and good conductivity. It has overcome the disadvantages of Copper Clad Aluminum wire (the diameter is below 0.5mm) with low strength and easily broken. We have won a lot of customers since the products open to the market. Application:

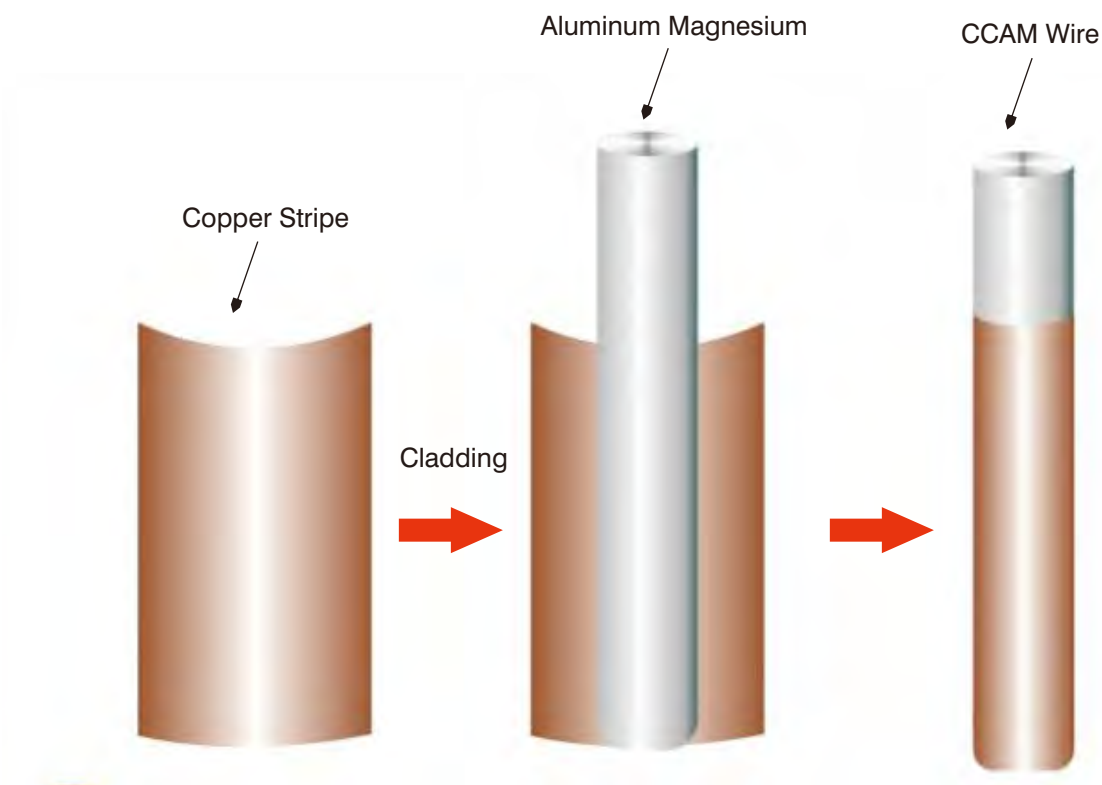
- 1) Braiding as shielding layer in cable
- 2) As conductor for LAN cable
- 3) in the field which has higher requirement on tensile strength
- 4) Mechanics & electrics performance comparison between CCA and CCAM.



Copper Clad Aluminum Magnesium Wire

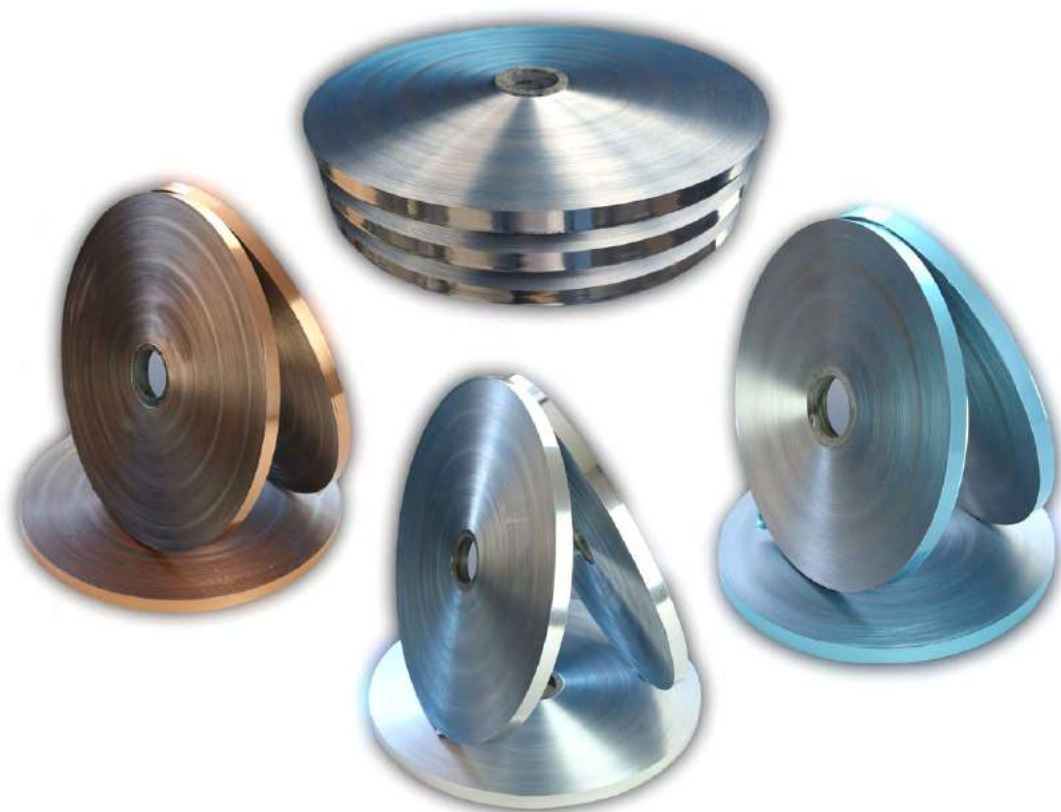
Type	T strength Mpa		Extensibility %	Specific resistance 20Ω. mm ² /m		Density g/cm ³	
	CCA	CCAM		CCA	CCAM	CCA	CCAM
10A	≤138		≥15	0.02743		3.32	
10H	193		≥1.0	0.02743		3.32	
15A	≤138	≥172	≥15	0.02676	0.02999	3.63	3.75
15H	193	251	≥1.0	0.02676	0.02999	3.63	3.75

Name Spec.	Diameter	Copper In volume	Copper In mass	Conductivity	Tensile Strength	Elongation	Density
CCAM-D	0.12 -3.00mm	Cu < 10	Cu < 26.8	± 37%	± 220 Mpa	≥ 8 %	2.9 -- 3.0 g/cm ³
CCAM-10	0.12-3.00mm	Cu-10 %	Cu 26.8-30%	55% - 57%	± 180 Mpa	≥ 10 %	3.62- 3.7 g/cm ³
CCAM-15	0.12 -3.00mm	Cu-15%	Cu 37-40%	57% ---59%	± 190 Mpa	≥ 10 %	3.72- 3.8 g/cm ³



Different Kinds:

Structure	Normal laminated thickness	Width	Length	ID	OD	Packing
AL+PET	7 μ mAlu+15 μ mPet+3 μ mGlue	6mm-1000mm as your required	500mm-7000mm	2"or3"	250mm-600mm	Polybag caron pallet
	9 μ mAlu+12 μ mPet+3 μ mGlue					
AL+PET+EAA	7 μ mAlu+15 μ mPet+25 μ mEAA+6 μ mGlue					
AL+PET+AL	6 μ mAlu+15 μ mPet+6 μ mAlu+6 μ mGlue					
AL+PET+AL+EAA	7 μ mAlu+15 μ mPet+7 μ mAlu+25 μ mEAA+9 μ mGlue					
PET+AL+PET	15 μ mPet+7 μ mAlu+15 μ mPet					
PET+PET	15 μ mPet+15 μ mPet+3 μ mGlue					
Polyester Tape	15 μ m,18 μ m					



Specifications:

The following is the single side aluminium mylar tape specifications for you take reference:

Description:AL+PET Tape(AL/Myler Tape)

Composition:Aluminium foil and polyester film

Name:0.02mm colored household aluminum foil roll price

Structure	Thickness(μm)	Proportion(g/m^2)	Elongation(%)	Strength($\text{N}/15\text{mm}$)
6 μm AL/12 μm PET	20	36	30	2.7
7 μm AL/15 μm PET	25	43	35	2.7
7 μm AL/20 μm PET	30	50	35	3
9 μm AL/12 μm PET	25	45	30	2.7
9 μm AL/15 μm PET	30	49	35	3
9 μm AL/20 μm PET	35	55	35	3
9 μm AL/25 μm PET	38	62	20	4
12 μm AL/12 μm PET	25	53	20	2
12 μm AL/15 μm PET	30	57	20	3
12 μm AL/20 μm PET	35	63	30	4
15 μm AL/15 μm PET	30	65	20	3
25 μm AL/15 μm PET	45	92	20	3
30 μm AL/25 μm PET	60	119	20	3
30 μm AL/30 μm PET	65	126	20	5
40 μm AL/30 μm PET	75	153	20	5
40 μm AL/38 μm PET	80	163	20	5
50 μm AL/25 μm PET	90	173	20	5
50 μm AL/50 μm PET	100	207	35	6

Above values refer to your current production and must be interded as average values
The reference is not including all specification.

Catalog

Product name Aluminum foil 8011

Product	Alloy	Thickness	Width	ID mm	Remark
Cable wrap foil	1235/8011-O	0.2-2.0mm	60-1700mm	76 152 200 300 400 500	Accept customization
Bottle cap foil	8011-H14/H16				
Household foil	1235/8011-O				
Container foil	3003-H24/8011-O				
Flexoble Packing foil	1100/1235/8011-O				
Lable foil	8011-O				

Application



Al-Mg alloy wire

It is made by melting aluminum ingot, magnesium ingot and other metal raw materials which will get through several times drawing processes and high-temperature annealed. There will be no metamorphosing during the heat treatment or mechanical workout. Producible scope: diameter is from $\Phi 0.10\text{mm}$ to 3.00mm .

Product Features: bright color and excellent electrical conductivity, can bear being bended, good tensile strength and elongation, light density and so on.

Main Application: flexible coaxial cable, a variety of audio and video cable, vehicle signal cable, network cable, data transmission cables and so on. Al-Mg alloy wire 5154 can be used in the above cables: cable conductor, braiding and shielding, the single wire conductor and other conductors. Applicable to a variety of electronic components' lead wire, such as capacitors, resistors and so on.

Al-Mg alloy wire 5154(parameter table)



Nomial diameter Φ /mm	Diameter difference \pm mm	Resistivity (20℃) $\leq \Omega \cdot \text{km} / \text{mm}^2$	Measured resistance (20℃) $\leq \Omega / \text{km}$	Density (20℃)g / cm ³	conductivity (20℃) $\geq \%$
0.1	0.003	48	6111	2.78	36
0.11	0.003	48	5050	2.78	36
0.12	0.003	48	4244	2.78	36
0.13	0.003	48	3616	2.78	36
0.14	0.003	48	3118	2.78	36
0.15	0.003	48	2716	2.78	36
0.16	0.003	48	2387	2.78	36
0.17	0.003	48	2114	2.78	36
0.18	0.003	48	1886	2.78	36
0.19	0.003	48	1692	2.78	36
0.2	0.004	48	1527	2.78	36
0.25	0.004	48	977	2.78	36
0.3	0.004	48	679	2.78	36
0.35	0.004	48	498	2.78	36
0.4	0.005	48	381	2.78	36
0.45	0.005	48	301	2.78	36
0.5	0.005	48	244	2.78	36
0.64	0.006	48	149	2.78	36
0.7	0.007	48	124	2.78	36
0.81	0.008	48	93.1	2.78	36
0.9	0.009	48	75.4	2.78	36
1.02	0.01	48	58.7	2.78	36
1.13	0.011	48	47.8	2.78	36
1.38	0.013	48	32	2.78	36
1.63	0.016	48	23	2.78	36
1.78	0.017	48	19.2	2.78	36
1.96	0.019	48	15.9	2.78	36

Intensity test of the soft state ≥N	Tensile strength of soft-state ≥N / mm2	soft-state elongstion ≥%	Hard measured intensity ≥N	Tensile strength of hard-state ≥N / mm2	Hard elongation ≥%
1.6	210	8	2.6	340	1
1.9	210	8	3.2	340	1
2.3	210	8	3.8	340	1
2.7	210	8	4.5	340	1
3.2	210	8	5.23	340	1
3.7	210	10	6	340	1
4.2	210	10	6.8	340	1
4.7	210	10	7.7	340	1
5.3	210	10	8.6	340	1
5.9	210	10	9.6	340	1
6.5	210	10	10	340	1
10	210	12	16	340	1
14	210	12	24	340	1
20	210	12	32	340	1
26	210	12	42	340	1
33	210	12	54	340	1
41	210	12	66	340	1
67	210	12	109	340	1
80	210	12	130	340	1
108	210	12	175	340	1
133	210	12	216	340	1
171	210	12	277	340	1
210	210	12	340	340	1
314	210	12	508	340	1
438	210	12	709	340	1
522	210	12	846	340	1
633	210	12	1025	340	1

Al-Mg Alloy Wire

The above is just for reference, we can do as customer's order.

Package size mm(reel)	Φ105×120	Φ125×120	Φ185×180	Φ250×200	Φ400×280	Φ500×340	Φ600×340	Φ800×560
Weight of wire per reel(kg)	1kg	1.5kg	3.4kg	12kg	45kg	100kg	150kg	350kg



CCS(cladding)

Product Name: CCS (cladding)

Specification Range: Φ 0.08mm- Φ 3.0mm;

Technical Parameter: based on customer's requirements

Application: braid shielding & cable conductor (single or stranded) for coaxial cable, power cable, signal cable, network cable, LAN, etc.

Package: Please advise the spool size or your special requirements

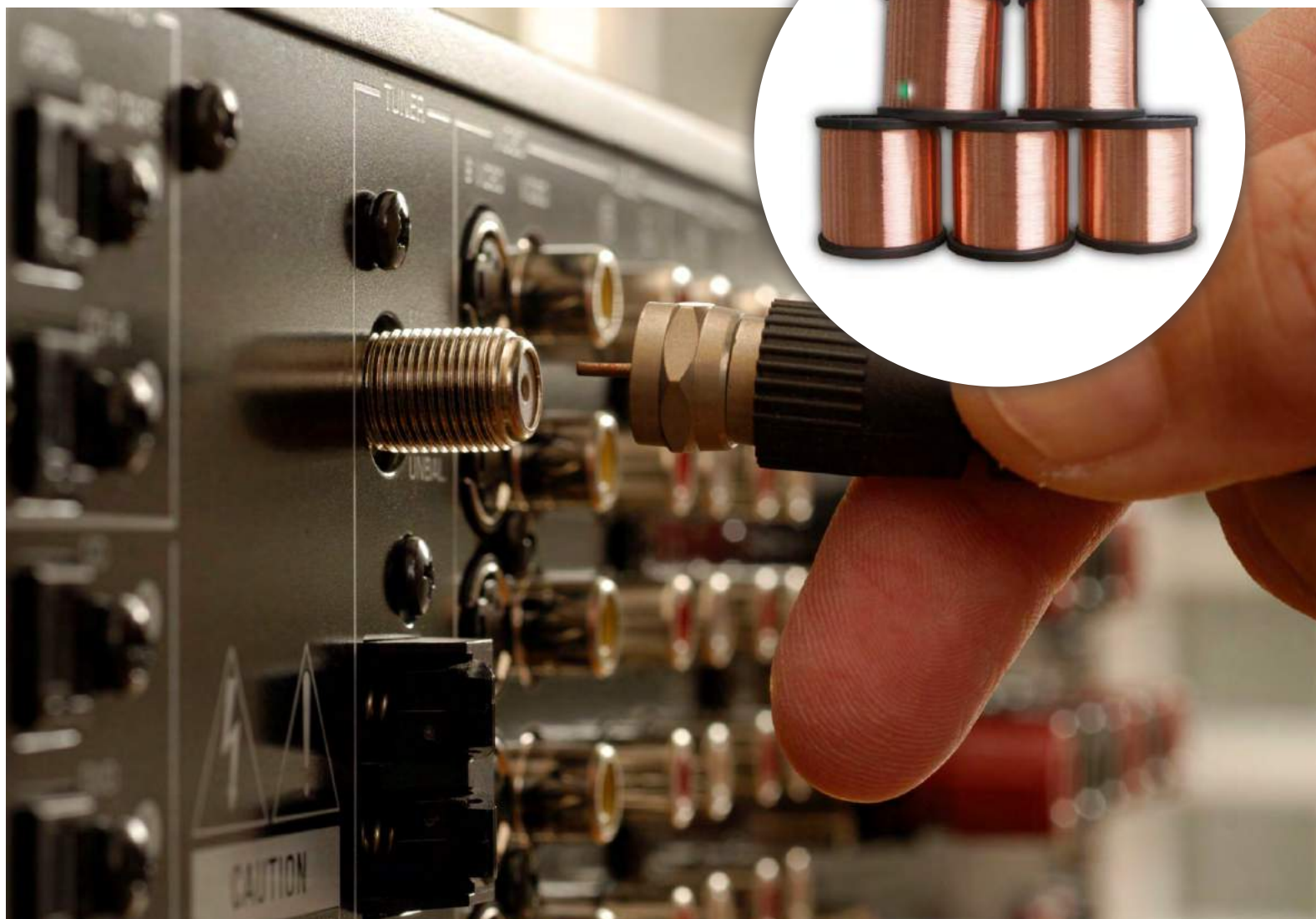
Tinned CCS wire combines the advantages of high tensile strength, corrosive resistance and solderability in one single material. Its conductivity is greater than 27% IACS, with 3 kinds of mechanical status: Annealed(R), Slight annealed (BY) and Hard drawn (Y)

Application of Tinned CCS wire

Lead wire of various electronic components

Inner conductor of rubber insulation cables

Conductor of hook-up wire for instruments Shielding



EAL wire

Product Name: Enameled aluminum wire (EAL)

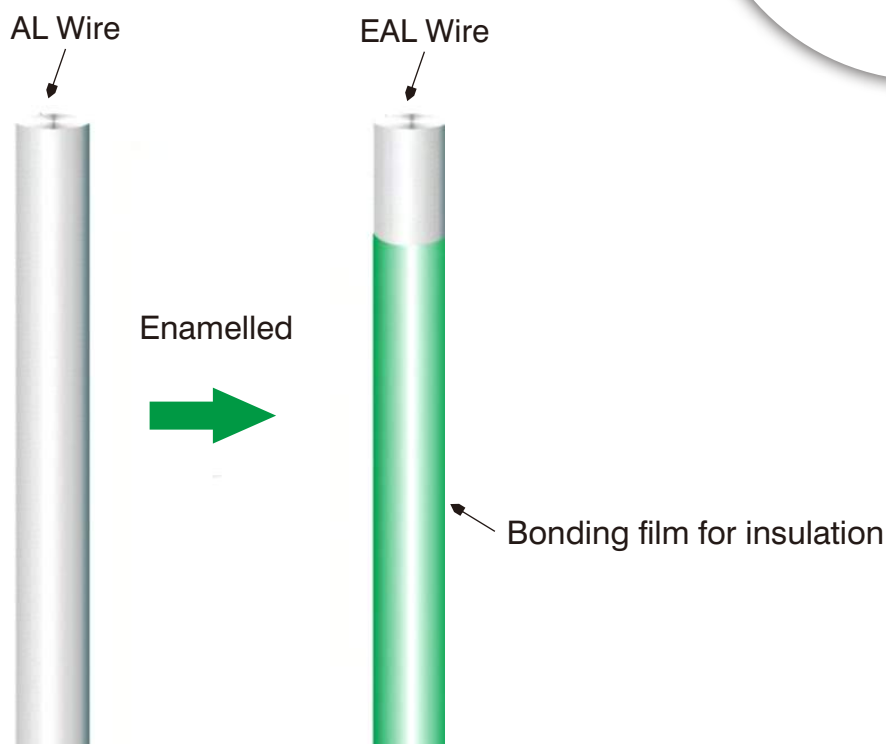
Specification: Φ 0.12mm- Φ 8.0mm;

Technical Parameter:

based on customer's requirements.

Application:

suitable for transformer, generator, magnetic coil, all kinds of motor winding coil, compressor, etc.



ECCA wire

Product Name: Enameled aluminum wire (EAL)

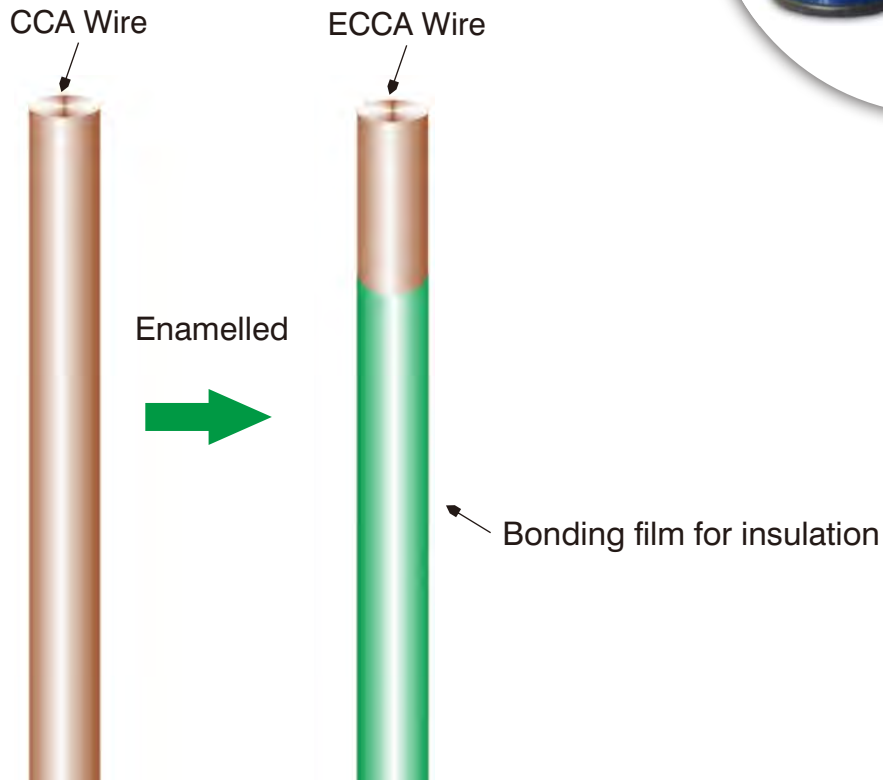
Specification: Φ 0.08mm- Φ 6.0mm;

Technical Parameter:

based on customer's requirements.

Application:

suitable for transformer, generator,



Enameled Copper Wire(EC)

ECCA wire

Product Name: Enameled aluminum wire (EAL)

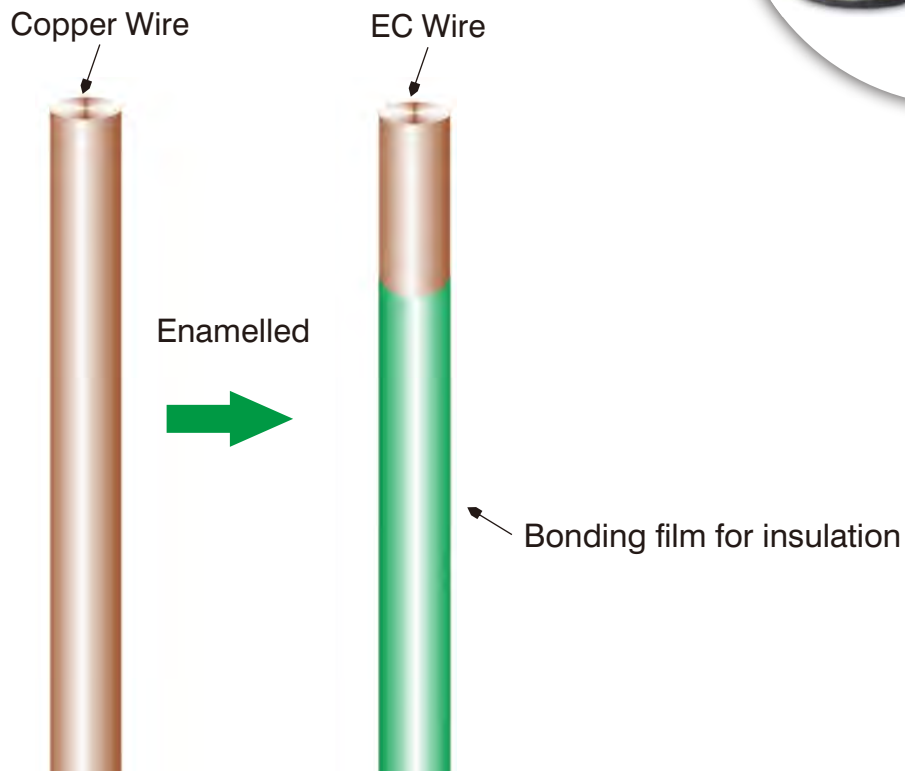
Specification: Φ 0.1mm- Φ 6.0mm;

Technical Parameter:

based on customer's requirements

Application:

suitable for magnetic coil, all kinds of motor winding coil, etc.



Tinned copper clad aluminum Wire

is made by covering a coating of tin on the surface of copper clad aluminum wire by hot dip method, which is made up by using pure aluminum wire as core. It adopts the advanced coating and welding technology in the world. Plating copper concentrically on the concentric line of aluminum, realizes metallurgy combination between copper coating and aluminum. There will be no flaking off during the heat treatment or mechanical workout. The TCCA is a best new clad metal wire instead of pure copper wire. Producible scope: the diameter is from 0.15mm to 0.80mm.

Product Features: shiny & uniformity tin layer, excellent electrical conductivity, bear bending, good tensile strength, excellent welding and corrosion, with the great light specific gravity, and savings resources of copper.

Main Application: flexible coaxial cable, a variety of audio and video cable, vehicle signal cable, network cable, data transmission cables and so on. Can be used in the above cables: Cable conductor, braiding and shielding, the single wire conductor and other conductors.

Technical Characteristics						
Type	Diameter & Tolerance	Tensile Strength (MPa) _{max}	Resistivity (Ω.mm ² /m) Max at 20°C	Elongation (%) _{min}	Thickness of Tin (μm) _{min}	Density (g/cm ³) _{Max} at 20 °C
TCCA	0.4mm±1%	172	0.02676	10	1.5	3.68
	0.35mm±1%				1.3	
	0.3mm±1%				1.2	
	0.25mm±1%				1.1	
	0.20±0.003mm			5	1	
	0.18mm±0.003mm				0.9	
	0.15mm±0.003mm				0.7	
	0.127mm±0.003mm				0.5	

Tinned Copper Clad Aluminum Magnesium Wire(Tinned CCAM wire)

Specification:

Φ0.10mm-Φ0.80mm

Tinned CCAM wire with CCAM core ,then painted with the Tin layer,It`s a new shielding material which combines the good conductivity of Copper and light weight Aluminum ,It is good at shielding ,easy weld and not easy to oxidation.

Application:

- 1.Used for produce braiding wire. Braiding wire used for flexible connections of electrical installation switching device;
- 2.Used for production of the wave-proof cover. Wave-proof cover used for prevent radio frequency interference or protection of shielding copper braided cover.
3. Used in the production of soft wire.Soft wire is power transmission and distribution in electrical devices and electrical and electronic equipments and the components of silicon controlled flexible connections;
4. All kinds of shielding network line; All kinds of tape screened multi-fiber signal cables, etc.

Technical Characteristics						
Type	Diameter&Tolerance	Tensile strength (MPa)	Resistivity	Elongation	Thinckness of Tin	Density
TCCAM	0.40mm±1%	172	clad type 0.03015	10	1.5	clad type 0.03015
	0.35mm±1%				1.3	
	0.30mm±1%				1.2	
	0.25mm±0.003mm				1.1	
	0.20mm±0.003mm		plated type 0.047	5	1	plated type 2.85
	0.18mm±0.003mm				0.9	
	0.15mm±0.003mm				0.7	
	0.127mm±0.003mm				0.5	

Packing :

Length : 100M, 200M, 300M,305M,500M,1000M or as customer need

Manner : Reel with PET, Plastic Spool, Wooden Spool, carton, pull box, pallet.



Quality

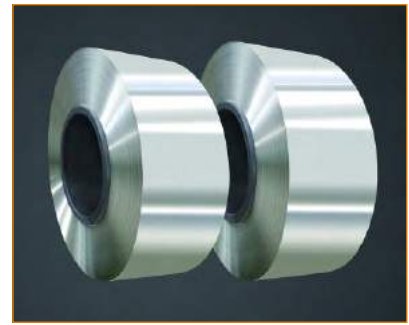
Professional

Safety



**ALWAYS
A PERFECT
CONNECTION**





HANGZHOU ZION COMMUNICATION CO.,LTD

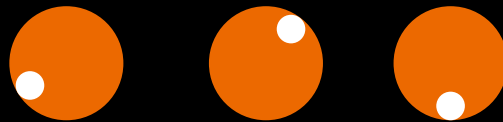
*Focus on customer needs,
provide competitive signal transmission products and services,
continue to create maximum value for customers!*

ZION COMMUNICATION
*To be the primary provider of the products and services
in the field of signal transmission all over the world!*

A large, white banner is displayed in a modern exhibition hall. The banner features a background image of a snow-capped mountain range. The text on the banner is in blue and black, with some parts in italics. The banner is held up by a metal frame.



For more information, please visit us at:
www.zion-communication.com



■ CONNECT US



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