Aluminum Strip For Argon Arc Welding

Aluminum strip for argon arc welding is specially designed for applications requiring continuous TIG welding or argon arc welding performance. It is commonly used in the production of welded aluminum cable sheath, aluminum protective sheath, metal cable covering and other aluminum welded structures.

During cable sheath production, the aluminum strip is longitudinally formed around the cable core and welded by argon arc welding equipment. Therefore, the material must have excellent weldability, clean surface, stable chemical composition, accurate dimensional tolerance and good forming performance.

We supply aluminum strip for argon arc welding in different alloys, tempers, thicknesses and widths according to customer cable design and welding process requirements.

Specifications

Product Name	Aluminum Strip for Argon Arc Welding
Alloy	1050, 1060, 1070, 1100, 3003, 3004, 5052, 5154, 5754
Temper	O, H12, H14, H16, H18, H22, H24, H32, H34
Thickness	0.20–3.00 mm or customized
Width	20–1200 mm or customized
Surface	Smooth, clean, oil-free, oxide-free
Edge	Slit edge, trimmed edge, burr-free edge
Coil ID	150 mm, 300 mm, 400 mm, 500 mm, 508 mm or customized
Coil Weight	According to customer requirements

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Tolerance	According to customer drawing or technical requirement
Application	Argon arc welding, TIG welding, welded aluminum cable sheath, aluminum protective sheath

Common Specification Range

Application	Common Thickness	Common Width
Welded aluminum cable sheath	0.30–1.50 mm	50–800 mm
Aluminum protective sheath	0.50–2.00 mm	100–1000 mm
General TIG welding aluminum strip	0.20–3.00 mm	Customized
Industrial welded aluminum covering	0.50–2.50 mm	Customized

Available Alloys

Alloy Series	Common Alloys	Main Features	Typical Application
1000 Series	1050, 1060, 1070, 1100	High purity, excellent weldability, good conductivity, good formability	Welded aluminum cable sheath, general TIG welding applications
3000 Series	3003, 3004	Better strength than pure aluminum, good corrosion resistance and weldability	Cable sheath, protective aluminum covering, industrial welded parts
5000 Series	5052, 5154, 5754	Higher strength, excellent corrosion resistance, good weldability	Higher-strength welded aluminum structures, special cable sheath applications

Mechanical Properties

Alloy	Temper	Tensile Strength Rm	Yield Strength Rp0.2	Elongation A	Features
1050	O	60–100 MPa	20–45 MPa	20–35%	Excellent formability and weldability

Alloy	Temper	Tensile Strength Rm	Yield Strength Rp0.2	Elongation A	Features
1050	H14	95–135 MPa	75–115 MPa	3–10%	Better strength with moderate formability
1060	O	60–100 MPa	20–45 MPa	20–35%	High purity and good welding performance
1060	H14	95–135 MPa	75–115 MPa	3–10%	Stable strength and dimensional performance
1070	O	55–95 MPa	15–40 MPa	22–38%	High conductivity and excellent ductility
1100	O	75–110 MPa	25–55 MPa	20–35%	Good corrosion resistance and weldability
3003	O	95–130 MPa	35–65 MPa	18–30%	Good formability and higher strength
3003	H14	140–180 MPa	115–160 MPa	3–10%	Stable mechanical performance
5052	O	170–215 MPa	65–100 MPa	12–25%	Higher strength and corrosion resistance
5052	H32	210–260 MPa	130–190 MPa	5–12%	Good balance of strength and formability
5754	O	190–240 MPa	80–120 MPa	12–25%	Good welding and corrosion resistance
5754	H22/H32	220–270 MPa	130–190 MPa	8–16%	Stable strength for welded applications

Welding Performance

For argon arc welding applications, aluminum strip should have stable welding performance and clean surface condition. The welding process requires the material to melt evenly and form a stable weld seam without excessive porosity, cracking or unstable bead appearance.

Key Welding Requirements

Stable chemical composition
Good metallurgical compatibility
Clean and oil-free surface
Low surface oxidation
Accurate thickness tolerance
Smooth edge condition
Good forming performance before welding
Stable weld seam quality after TIG welding
Good resistance to cracking during forming and welding

Why Surface Cleanliness Is Important

Surface quality is one of the most important factors for aluminum argon arc welding. Oil stains, dust, oxide layer, moisture or surface contamination may cause welding defects such as pores, black spots, unstable arc, incomplete fusion or poor weld appearance.
Our aluminum strip can be supplied with:
Clean surface
Oil-free surface
Smooth finish
Uniform color
No obvious oxidation stains
No cracks
No scratches affecting welding
No surface contamination

Edge Quality

For continuous cable sheath welding or automatic TIG welding production, edge quality is very important. Burrs or uneven edges may affect forming accuracy, welding seam alignment and welding stability.
We can supply:
Slit edge
Trimmed edge
Burr-controlled edge
Burr-free edge
Smooth edge for automatic welding line
Stable coil winding for continuous feeding

Key Features

Excellent argon arc welding performance
Suitable for TIG welding and continuous welding

Clean, smooth and oil-free surface
Stable chemical composition
Good elongation and formability
Accurate thickness and width tolerance
Burr-free edge available
Good corrosion resistance
Stable coil winding quality
Suitable for automatic welding production lines
Custom alloy, temper, thickness and width available

Applications

Aluminum strip for argon arc welding is widely used in:
Welded aluminum cable sheath
Aluminum protective cable sheath
Corrugated aluminum sheath cable
High-voltage cable sheath
Medium-voltage cable sheath
Power cable manufacturing
Control cable manufacturing
Communication cable shielding and sheath structures
Industrial aluminum welded structures
Aluminum covering and wrapping applications
TIG welded aluminum components

Packaging and Delivery

Aluminum strip for argon arc welding is supplied in coils. Each coil is packed properly to protect the surface and edges during storage and transportation.
Packaging Options
Moisture-proof paper wrapping
Plastic film protection
Wooden pallet packaging
Wooden case packaging
Eye-to-sky packaging
Eye-to-wall packaging
Edge protection
Export seaworthy packaging