



# MATERIALS WIRES & FOILS

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# **Metallization Aluminum Wires**

#### These pure Aluminum wires are used for metallization process in vacuum-coating equipments.

#### **SPECIFICATIONS**

Purity grades: from 99.5% to 99.99% Wire diameters: from 1.00 mm to 3.00 mm

# Al wire on plastic spool

#### **APPLICATIONS**

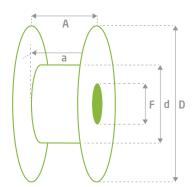
- Flexible packagings
- Solar films
- Capacitors
- Holograms
- Head lights
- Reflective coatings (various applications)

Each spool is delivered with a specific certificate of analysis, and individually identified which guarantees the total traceability of the material.



Other diameters and purities on request.

**ORDERING INFORMATION** 



#### STANDARD SPOOL DIMENSIONS (mm)

D	d	F	A	а	CAPACITY
200	102	51	53	44	2.2 kg
250	125	18	78	68	5.2 kg



# Wire Forming for Vacuum Metallization

#### Neyco provides Aluminum, Stainless Steel, Nickel/Chromium wire forming and other dedicated shapes for vacuum metallization.

Each lot of product is identified with a dedicated number, which guarantees the total traceability of the material. UHV Cleaning in our labotory.

Shapes, dimensions and weights: upon request.





# **Protective Aluminum Rolls**

Neyco provides high-quality Aluminum rolls dedicated to vacuum applications (UHV and secondary vacuum compatible).



P/N (INVENTORY)	DIMENSIONS	THICKNESS	PURITY
ROULALU	200 mm x 200 m	11 µm	99.5+%
ROULALU2	500 mm x 200 m	12 µm	99.5+%
ALLU100X30	100 mm x 200 m	30 µm	99.5+%
ROULALU-500x50	500 mm x 50 m	50 µm	99.5+%
ALU120x30	120 mm x 30 m	30 µm	99.5+%
ALU0.1X600X50	600 mm x 50 m	100 µm	99.5+%

Other thickness and dimensions available on request (even in small quantities).



## Wires, Foils & Rods

## Neyco provides high purity metals and metal alloys in wires, rods, plates and foils.

#### SOME EXAMPLES OF MATERIALS

Al, Ag, Au, Cr, Co, Cu, Hf, In, Fe,  $LaB_{6}$ , Mg, Mo, Ni, Nb, Pb, Pt, Pd Ta, Si, Sn, Ti, W, V, Zn, Zr, Stainless Steel 304L/316L/316LN...AlSi...

#### **PURITIES**

99.8% to 99.999+%.



#### DIMENSIONS

- Thickness:
  - from 2  $\mu m$  to 25  $\mu m$  for ultrathin foils,
  - few  $\mu m$  to several mm for others.
- Other dimensions:
  - according to request.

All items are delivered with an analysis certificate.





# Bonding Wires

Bonding wires are used for a wide range of products, such as integrated circuits (ICs and LSIs) and transistors. It connects Aluminum electrode and Lead electrode on semiconductor IC chip.

Our bonding wires are delivered with a specific certificate of analysis.

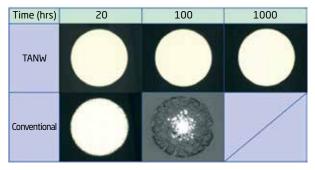
## TANAKA ALUMINUM BONDING WIRES

#### **AI BONDING WIRE**

#### Features

- Excellent corrosion resistance under PCT (TANW type)
- Excellent bondability
- Hard, Soft-1, and Soft-2 are available according to applications.

#### **Cross section after PCT**



Wire Dia.: 300 µm PCT: at 121°C, 100% RH, 2atm

#### Dimensions

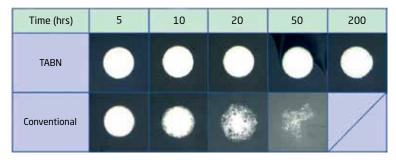
Diameter from 100  $\pm$ 5 µm to 500  $\pm$ 10 µm.

#### **AI 1%SI BONDING WIRE**

#### Features

- Uniform Si distribution
- Stable mechanical properties
- Stable quality wire without any curl, dirt and surface flaws
- Excellent bondability
- Excellent corrosion resistance under PCT (TABN type)

#### Cross section after PCT



Wire Dia.: 30 μm PCT: at 121°C , 100% RH, 2atm

#### **AI ALLOY BONDING WIRE**

#### Features

- 99% purity Al alloy
- Finer grain size & higher tensile strength
- Excellent heat resistance
- Excellent thermal fatigue resistance

#### Dimensions

Diameter from 100  $\mu$ m to 500  $\mu$ m.

### Dimensions

Diameter from 18  $\pm$ 1 µm to 80  $\pm$ 3 µm.

## **TANAKA GOLD BONDING WIRES**

#### **Au BONDING WIRE**

#### **Features**

- Stable stitch bond (1<sup>st</sup> and 2<sup>nd</sup> bondings)
- Excellent performance in thermal stress environment
- Fine pitch bonding
- Excellent bonding
- Good for fine pitch small pads
- · High strength with less wire sweep
- Less neck damage, good for fine pitch pads
- Super low loops (long & short)

#### Dimensions

Diameter from 15  $\pm$ 1 µm to 38  $\pm$ 1 µm.



Gold bonding wire spool

#### **Au ALLOY BONDING WIRE**

#### **Features**

- Higher bond reliability on halogen compound (GPG series)
- Good squashed ball shape (GPG -2)
- Continuous wire bond stability (GPG-3)

#### Dimensions

Diameter from 15 µm to 30 µm.

#### **Au BUMPING WIRE**

#### Features

- Small deviation of ball neck height after bumping
- Steady bump shape
- No bond pad damage after bonding (LGBE)
- Low deterioration of shear strength in aging test at 200°C (GBC)

#### Dimensions

Diameter from 15 µm to 38 µm.



## TANAKA SILVER ALLOY BONDING WIRE

#### **Ag ALLOY BONDING WIRE**

#### Features

- Reduce material cost with good bondability
- Lower material costs than Gold wire and higher bondability than Copper wire
- High reflectivity in low wavelength range
- Low resistivity (SEB.SEC type)
- Softer FAB (SEC type)

#### Dimensions

Diameter from 15 µm to 30 µm.



## TANAKA COPPER BONDING WIRES

#### **Cu BONDING WIRE**

#### Features

- Enables a reduction in costs with a lower material cost than gold bonding wires
- Excellent reliability
- Wide bonding window
- High and stable bondability

#### **Cu ALLOY BONDING WIRE**

#### Features

- Higher bond reliability
- Wides bonding window
- Lower resistiviity
- Softer FAB

#### Dimensions

Diameter from 15 ±1  $\mu m$  to 500 ±10  $\mu m.$ 

#### Dimensions

Diameter from 18  $\mu m$  to 25  $\mu m.$ 





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