

Shandong Zhuo Tai Import and Export Co., Ltd. has been specializing in the production of aluminum ingots, aluminum sheets, aluminum bars, aluminum wires, aluminum profiles (6063), and copper cathodes, as well as the sales of magnesium ingots, lead ingots, zinc ingots, antimony ingots, and metal scrap for over 15 years.

We operate a production facility with an annual capacity of 120,000 tons. Our company is supported by a team of professional foreign trade experts who have long been engaged in import and export operations, bringing extensive expertise, dedication, and dynamism to our business.

Our customers are located across the globe, including regions such as East Asia, Southeast Asia, North America, Europe, and Australia.

catalog:

(1)

Metal ingot: Zinc ingot

Lead ingot

Aluminum ingot

Magnesium ingot

Antimony ingot

Tin ingot

Alloy metal: aluminum alloy ingot

Aluminum alloy bar

Zinc alloy ingot

Silicon manganese alloy

Wolfram-cobalt hard alloy

Scrap: copper wire scrap

Aluminum wire scrap

Powder: Cobalt powder

Nickel powder

(2)

Aluminum: aluminum ingot

Aluminum bar

Aluminum scrap

Aluminum alloy

Zinc: zinc ingot

Zinc alloy

Copper: copper cathode

Copper wire scrap

Magnesium: magnesium ingot  
Lead: lead ingot  
Cobalt: cobalt powder  
Cobalt sheet metal  
Wolfram-cobalt hard alloy  
Nickel: nickel powder  
Nickel sheet metal  
Silicon manganese alloy

**Product parameter:**  
**The Minimum Order Quantity of each product is 25 Tons.**

**Aluminum ingot A7: FOB\$3200 PER TON**



Chemical Composition: al  
Al (Min): 99%-99.9%  
Place of Origin: China (Mainland)

Appearance: silvery white  
Packaging:

About 25Kg /Ingot, Packed in wooden case, Net weight 1000Kg/ Case,or as customer's requirements.

Aluminum ingot for remelting is produced by molten salt electrolysis method using alumina and cryolite. Products meet the national standard GB/T1196-2002. The surface of ingot is clean and smooth.

Applications:

1. mainly used for melting ingot
2. discontinuous melting with scrap
3. easy control and operation
4. fast melting
5. Used for industry such as automobile, pinning and weaving, electron broadly and so on

The main models are as follows: AL99.90, AL99.85, AL99.70A, AL99.70, AL99.60, AL99.50, AL99.00

| Grade   | Chemical Composition % |                   |      |       |      |      |       |    |        |      |
|---------|------------------------|-------------------|------|-------|------|------|-------|----|--------|------|
|         | Al $\geq$              | impurities $\leq$ |      |       |      |      |       |    |        |      |
|         |                        | Si                | Fe   | Cu    | Ga   | Mg   | Zn    | Mn | others | Sum  |
| Al99.9  | 99.90                  | 0.50              | 0.07 | 0.005 | 0.02 | 0.01 | 0.025 | -  | 0.010  | 0.10 |
| Al99.85 | 99.85                  | 0.80              | 0.12 | 0.005 | 0.03 | 0.02 | 0.030 | -  | 0.015  | 0.15 |
| Al99.7  | 99.70                  | 0.10              | 0.20 | 0.010 | 0.03 | 0.02 | 0.030 | -  | 0.030  | 0.30 |
| Al99.6  | 99.60                  | 0.16              | 0.25 | 0.010 | 0.03 | 0.03 | 0.030 | -  | 0.030  | 0.40 |
| Al99.5  | 99.50                  | 0.22              | 0.30 | 0.020 | 0.03 | 0.05 | 0.050 | -  | 0.030  | 0.50 |
| Al99.00 | 99.00                  | 0.42              | 0.50 | 0.020 | 0.03 | 0.05 | 0.050 | -  | 0.050  | 1.00 |

**Aluminum bar: FOB\$3500 PER TON**



**Application:**

Aluminum bar can be used in aviation, aircraft construction, rivet, trailer wheel, the propeller components, metallic building material, forging material, welding material, etc.

|                    |                                |
|--------------------|--------------------------------|
| Grade              | 6063, 6061, 2024, 7075 etc     |
| Round Bar Extruded | φ10mm-φ410mm                   |
| Round Bar Drawn    | φ1.0mm-φ10.0mm                 |
| Square & Flat Bar  | 8mmx8mm-570mmx10mm             |
| Angle Bar          | 8mmx8mmx1mm-280mmx40mmx4mm     |
| U Bar              | 10mmx10mmx1mm-110mmx260mmx16mm |

**Aluminum scrap 6063: FOB\$2400 PER TON**



Density: 2.702g/cm<sup>3</sup>

Melting point: 660.37°C

Boiling point: 2467.0°C

Color: silver white

WEIGHT :15-30KG

| ITEM | STANDARD % | TEST RESULT % |
|------|------------|---------------|
| Si   | 6.5-7.5    | 6.73          |
| Fe   | 0.12 max   | 0.047         |
| Cu   | 0.1 max    | 0.0022        |
| Mn   | 0.05 max   | 0.013         |
| Mg   | 0.3-0.45   | 0.381         |
| Zn   | 0.05 max   | 0.016         |
| Ti   | 0.2 max    | 0.14          |

|    |         |       |
|----|---------|-------|
| Al | Balance | 92.62 |
|----|---------|-------|

|                     |                   |
|---------------------|-------------------|
| Aluminum scrap 6063 | Al content 98.49% |
| Aluminum scrap 6061 | 95%               |
| Aluminum wire scrap | 99.76%            |

**Aluminum wire scrap: FOB\$2500 PER TON**



CERTIFICATE OF ANALYSIS

BATCH NO:YE-250228  
DATE:02,28,2025

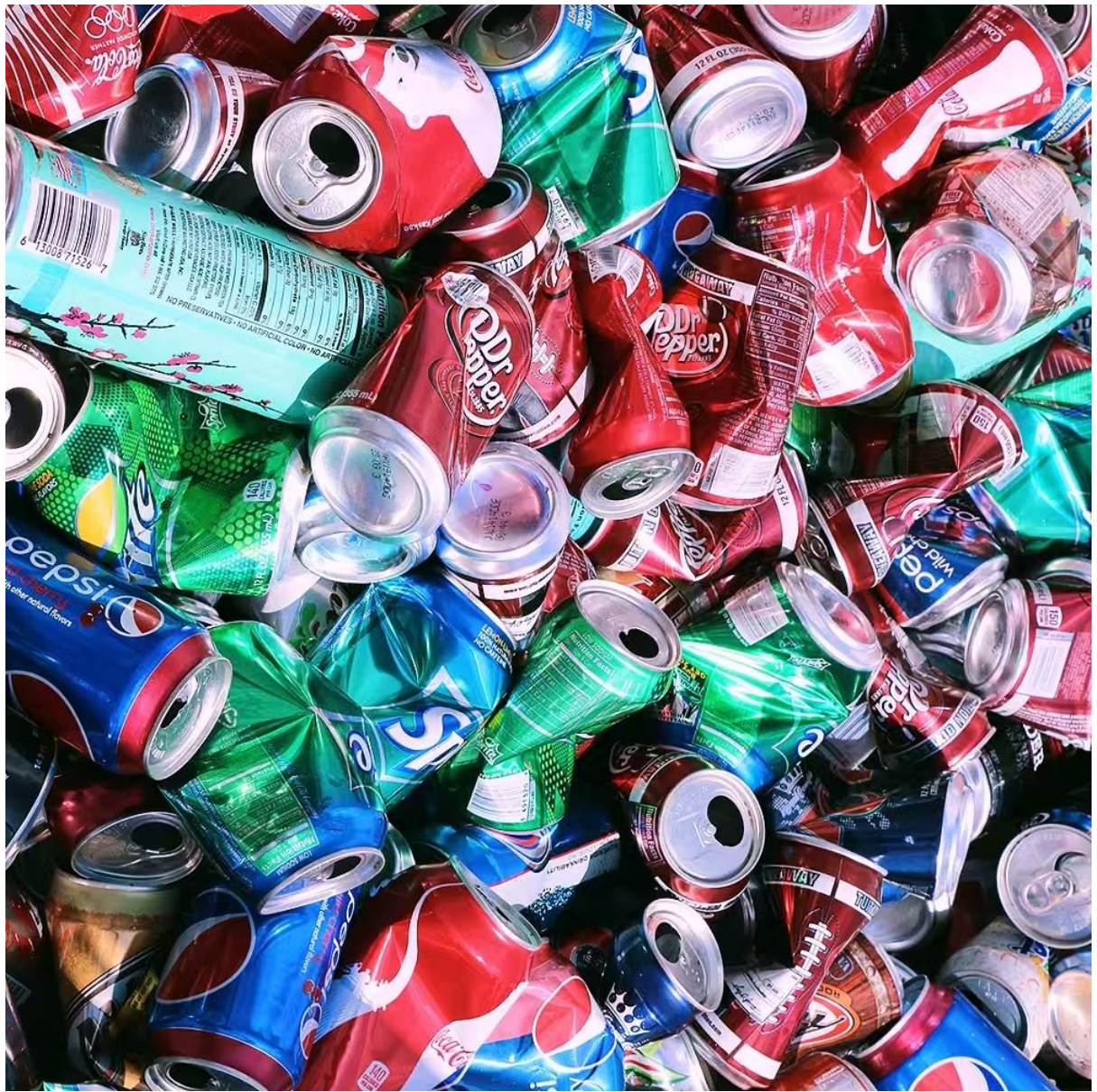
|                 |               |            |
|-----------------|---------------|------------|
| NAME            | Aluminum wire |            |
| PRODUCTION DATE | 2025. 02. 28  |            |
| ANALYSIS RESULT |               |            |
| ITEM            | VALUE         | RESULT (%) |
| Al              | Margin        | 99.76%     |
| Si              | 0.10-0.30%    | 0.10%      |
| Cu              | 0.10%Max      | 0.02%      |
| Mg              | 0.10%Max      | 0.03%      |
| Zn              | 0.10%Max      | 0.045%     |
| Mn              | 0.10%Max      | 0.01%      |
| Ti              | 0.10%Max      | 0.005%     |
| Cr              | 0.10%Max      | 0.01%      |
| Fe              | 0.02%Max      | 0.015%     |
| Sum             | 0.01%Max      | 0.005%     |

INSPECTOR:WU NING

R—INSPECTOR:CHENG



Aluminum ubc scrap: FOB\$1850 PER TON



CERTIFICATE OF ANALYSIS

BATCH NO:YE-250110  
DATE:01,10,2025

|                 |                   |            |
|-----------------|-------------------|------------|
| NAME            | Aluminum UBC cans |            |
| PRODUCTION DATE | 2025.01.10        |            |
| ANALYSIS RESULT |                   |            |
| ITEM            | VALUE             | RESULT (%) |
| Al              | Margin            | 95.32%     |
| Si              | 0.20-0.60%        | 0.57%      |
| Cu              | 0.50%Max          | 0.40%      |
| Mg              | 1.50-2.50%        | 1.90%      |
| Zn              | 0.10%Max          | 0.10%      |
| Mn              | 0.50%Max          | 0.45%      |
| Ti              | 0.20%Max          | 0.20%      |
| Cr              | 0.10%Max          | 0.10%      |
| Fe              | 0.75%Max          | 0.70%      |
| Sum             | 0.50%Max          | 0.26%      |

INSPECTOR:WU NING

R—INSPECTOR:CHENG



Aluminum alloy ingot: FOB\$3300 PER TON



Weight: 6KG

Grade: LYD112, ZLD101, ZLD101A, ZLD102, ZLD106, ZLD107, ADC10, ADC12, AC4B, A3870, 51K, A365 etc.

Technical specification:

Due to many grades, please feel free to contact us if you want to know the detailed specification.

Packing: Approx 500~900kg each bundle strapped by steel bands without any wooden pallets, total 13 layers including foot ingots, no double stacked bundles.

| Number | Chemical composition % |        |     |     |     |     |     |     |     |
|--------|------------------------|--------|-----|-----|-----|-----|-----|-----|-----|
|        | impurities ≤           |        |     |     |     |     |     |     |     |
|        | Cu                     | Si     | Mg  | Fe  | Zn  | Mn  | Ni  | Sn  | Al  |
| ADC12  | 1.5-3.5                | 9.6-12 | 0.3 | 0.9 | 1.0 | 0.5 | 0.5 | 0.3 | >86 |

**Aluminum alloy wheel scrap: FOB\$2400 PER TON**



|                      |                |                |                |                |                |
|----------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Element</b><br>元素 | <b>Al</b><br>铝 | <b>Si</b><br>硅 | <b>Cu</b><br>铜 | <b>Mg</b><br>镁 | <b>Zn</b><br>锌 |
| <b>Result,(ppm)</b>  | <b>98.32%</b>  | <b>0.37%</b>   | <b>0.09%</b>   | <b>0.60%</b>   | <b>0.10%</b>   |
| <b>Element</b>       | <b>Mn</b><br>锰 | <b>Ti</b><br>钛 | <b>Cr</b><br>铬 | <b>Fe</b><br>铁 | --             |
| <b>Result,(ppm)</b>  |                |                |                |                |                |
| <b>元素</b>            |                |                |                |                |                |



|              |            |       |       |       |           |           |       |           |      |       |
|--------------|------------|-------|-------|-------|-----------|-----------|-------|-----------|------|-------|
| Zn99.9<br>95 | 99.99<br>5 | 0.003 | 0.002 | 0.001 | 0.00<br>1 | 0.00<br>1 | 0.001 | --        | --   | 0.005 |
| Zn99.9<br>9  | 99.99      | 0.005 | 0.003 | 0.003 | 0.00<br>2 | 0.00<br>1 | 0.002 | --        | --   | 0.01  |
| Zn99.9<br>5  | 99.95      | 0.03  | 0.01  | 0.02  | 0.00<br>2 | 0.00<br>1 | 0.01  | --        | --   | 0.05  |
| Zn99.5       | 99.5       | 0.45  | 0.01  | 0.05  | --        | --        | --    | 0.00<br>5 | 0.01 | 0.5   |
| Zn98.5       | 98.5       | 1.4   | 0.01  | 0.05  | --        | --        | --    | --        | --   | 1.5   |

### Zinc alloy ingot: FOB\$3450 PER TON



Zinc alloy ingot Zamak  
 #2/#3/#5 Molecular  
 Formula: Zn  
 Zn (purity): 98.7%-  
 99.995% Molecular  
 Weight: 65.39  
 Density: 7.14( g/cm<sup>3</sup>)

**Application: Zamak #2:**Used to have special requirements for mechanical properties, high hardness requirements, dimensional accuracy requirements of the general mechanical parts

**Zamak #3:**Good fluidity and mechanical properties. Used in castings with low mechanical strength requirements

**Zamak #5**: Good fluidity and good mechanical properties. Used in castings with certain requirements for mechanical strength.

| Zinc ingot (GB/T470-1997) |           |       |       |       |       |       |      |       |      |       |
|---------------------------|-----------|-------|-------|-------|-------|-------|------|-------|------|-------|
| MAR K                     | Zn $\geq$ | Pb    | Cd    | Fe    | Cu    | Sn    | Al   | As    | Sb   | Total |
| Zn99.995                  | 99.995    | 0.003 | 0.002 | 0.001 | 0.001 | 0.001 | --   | --    | --   | 0.005 |
| Zn99.99                   | 99.99     | 0.005 | 0.003 | 0.003 | 0.002 | 0.001 | --   | --    | --   | 0.01  |
| Zn99.95                   | 99.95     | 0.02  | 0.02  | 0.01  | 0.002 | 0.001 | --   | --    | --   | 0.02  |
| Zn99.5                    | 99.5      | 0.3   | 0.07  | 0.04  | 0.002 | 0.002 | 0.01 | 0.005 | 0.01 | 0.5   |
| Zn98.7                    | 98.7      | 1     | 0.2   | 0.05  | 0.005 | 0.002 | 0.01 | 0.01  | 0.02 | 1.3   |

| Chemical composition (EN1774)<br>Guaranteed analysis ( %) | ZAMAK5<br>ZL5/ZL0410<br>ZNAL4Cu1 |
|---|----------------------------------|
| Al  | 3.8-4.2                          |
| Cu  | 0.7-1.1                          |
| Mg  | 0.035-0.06                       |
| Pb  | $\leq 0.003$                     |
| Fe  | $\leq 0.020$                     |
| Cd  | $\leq 0.003$                     |
| Sn  | $\leq 0.001$                     |
| Si  | $\leq 0.02$                      |
| Ni  | $\leq 0.001$                     |

**Copper cathode: FOB\$11500 PER TON**



1.purity 99.990%-99.997%

2.Weight of each sheet: 125kgs (+/- 1%)

3.Net weight of each pallet: 2mts (+/- 1%)

4.Min. weight in each container: 20mts approx.

5.Gross weight of each container: 22.20mts approx.

6. Dimensions: 914\*914\*12mm

| ELEMENT S |    | VALUE          | ELEMENT S |    | VALUE           |
|-----------|----|----------------|-----------|----|-----------------|
| Copper    | Cu | 99.97%<br>Min. | Silica    | Si | 0.3ppm<br>Max.  |
| Cobalt    | Co | 0.2ppm<br>Max. | Bismuth   | Bi | 0.1ppm<br>Max.  |
| Lead      | Pb | 0.2ppm<br>Max. | Tellurium | Te | 0.05ppm<br>Max. |
| Iron      | Fe | 2ppm Max.      | Silver    | Ag | 10ppm<br>Max.   |
| Aluminum  | Al | 0.5ppm<br>Max. |           | Se | 0.3ppm<br>Max   |
| Manganese | Mn | 0.1ppm<br>Max. |           | S  | 4ppm Max.       |
| Nickel    | Ni | 0.2ppm<br>Max. |           | MG | 0.4ppm<br>Max.  |
| Antimony  | Sb | 0.1ppm<br>Max. |           | O2 | 0               |
|           | AS | 0.1ppm<br>Max. | -         |    |                 |

**Copper wire scrap:FOB\$9300 PER TON**



1bag about 1 ton bag size: 1 × 1m  
 Wire diameter: 0.20mm, 0.25mm, 0.30mm  
 Weight: 3kg, 5kg, 7kg, 15kg, 20kg  
 Purity:99.95% min

| Name       | Copper wire scrap (Millberry) 99.78% |            |
|------------|--------------------------------------|------------|
| Item       | Standard (%)                         | Results(%) |
| Purity (%) | ≥99.78                               | 99.9       |
| Carbon     | 0.03                                 | 0.03       |
| Coblet     | <0.001                               | 0.0009     |
| Iron       | 0.005                                | 0.005      |
| Phosphorus | <0.01                                | 0.009      |
| Sulphur    | <0.01                                | 0.009      |
| Zinc       | 0.003                                | 0.003      |

**magnesium ingot: FOB\$2550 PER TON**



Packing:

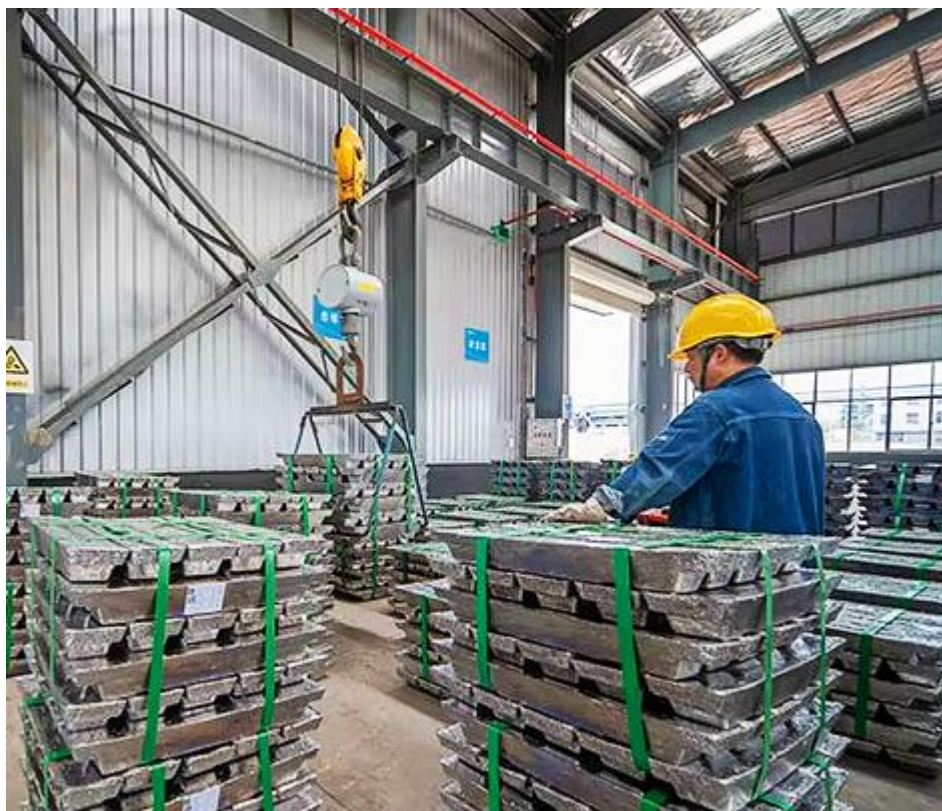
About 1000Kgs/Mg pallet covering with plastic bag, or according to customer's requirement.

Ingot weight :

15Kg+/- 0.5kg; 7.5+/-0.5Kg ; 300g+/-50g

| Mg Ingot |                      |       |       |        |        |       |       |       |        |
|----------|----------------------|-------|-------|--------|--------|-------|-------|-------|--------|
| Brand    | Chemical composition |       |       |        |        |       |       |       |        |
|          | Mg                   | Fe    | Si    | Ni     | Cu     | Al    | Cl    | Mn    | others |
| Mg99.98  | 99.98                | 0.002 | 0.003 | 0.002  | 0.0005 | 0.004 | --    | 0.002 | 0.02   |
| Mg99.96  | 99.96                | 0.004 | 0.004 | 0.0002 | 0.002  | 0.006 | 0.003 | 0.003 | 0.04   |
| Mg99.95  | 99.95                | 0.004 | 0.005 | 0.0007 | 0.003  | 0.006 | 0.003 | 0.01  | 0.05   |
| Mg99.90  | 99.90                | 0.04  | 0.01  | 0.001  | 0.004  | 0.02  | 0.005 | 0.03  | 0.10   |
| Mg99.80  | 99.80                | 0.05  | 0.03  | 0.002  | 0.02   | 0.05  | 0.005 | 0.06  | 0.20   |

**Lead ingot: FOB\$2700 PER TON**



| Test item | Pb    | Sb    | As    | Sn    | Cu    | Bi    | Fe    | Ni    | Ag    | Zn     |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Standard  | 99.97 | 0.001 | 0.001 | 0.001 | 0.001 | 0.025 | 0.001 | 0.001 | 0.003 | 0.0005 |

|  |      |  |  |  |  |  |  |  |  |  |
|--|------|--|--|--|--|--|--|--|--|--|
|  | min. |  |  |  |  |  |  |  |  |  |
|--|------|--|--|--|--|--|--|--|--|--|

Size : 645\*128\*90mm

Packing: lead ingot was wrapped by galvanized steel belt, 25 pcs per bundle, about 1200kgs per bundle.

Application:

1. lead-acid storage batteries.
2. Ammunition, cable sheathing and building construction materials
3. Counterweights, battery clamps
4. Cast products such as: bearing, ballast, gaskets, type metal etc.

### Cobalt powder:

Cobalt oxide:

Density: 6.45/cm<sup>3</sup>

molecular weight: 74.93

Melting point: 1935 °C

CAS NO.: 1307-96-6

Package: 25kg/drum

| content             | I Grade | II Grade |
|---------------------|---------|----------|
| Co %≥               | 72      | 72       |
| Ni %≤               | 0.05    | 0.1      |
| Fe %≤               | 0.05    | 0.1      |
| Mg %≤               | 0.03    | 0.05     |
| Ca %≤               | 0.03    | 0.05     |
| Mn %≤               | 0.03    | 0.05     |
| Zn %≤               | 0.03    | 0.05     |
| Cu %≤               | 0.03    | 0.05     |
| Cd %≤               | 0.005   | 0.005    |
| Insoluble Materials | 0.1     | 0.2      |
| Degree of fineness  | 325Mesh | 325Mesh  |

High purity cobalt powder:

| High Purity Cobalt Powder |         |        |        |        |        |        |
|---------------------------|---------|--------|--------|--------|--------|--------|
| Co                        | Fe      | Ni     | Al     | Si     | Ca     | Mg     |
| 99.95%                    | 0.0012% | 0.001% | 0.001% | 0.005% | 0.002% | 0.002% |

Packing: 20kg/25kg /30kg per barrel

Color: Gray Black

Application:

- 1, cemented carbide ,
- 2,diamond tools,
- 3,high temperature alloys,
- 4,magnetic materials etc.
- 5, producing Chemical products ,such as rechargeable battery, industrial blasting agents, rocket fuel, and medicine.

### **Cobalt sheet :**

CAS NO.:7440-48-4

Density: 8.9g/cm<sup>3</sup>

Melting point: 1495°C

Size: thickness: 0.025mm min

Width: 600mm max

| Cobalt sheet metal |           |           |
|--------------------|-----------|-----------|
| ITEM               | VALUE     | RESULT(%) |
| Purity             | Co: 99.98 | Co: 99.98 |
| C                  | 0.005     | 0.005     |
| S                  | <0.001    | <0.001    |
| Mn                 | 0.00038   | 0.00038   |
| Fe                 | 0.0049    | 0.0049    |
| Ni                 | 0.002     | 0.002     |
| Cu                 | 0.005     | 0.005     |
| As                 | <0.0003   | <0.0003   |
| Pb                 | 0.001     | 0.001     |
| Zn                 | 0.00083   | 0.00083   |
| Si                 | 0.001     | 0.001     |
| Cd                 | 0.0003    | 0.0003    |
| Mg                 | 0.00081   | 0.00081   |
| P                  | <0.001    | <0.001    |
| Al                 | <0.001    | <0.001    |
| Sn                 | <0.0003   | <0.0003   |
| Sb                 | <0.0003   | <0.0003   |
| Bi                 | <0.0003   | <0.0003   |

### **Wolfram-cobalt hard alloy:**

Constitute: wolfram carbide and cobalt metal

**Application:**

1. It can be used as cutters to cut cast iron, nonferrous metals, plastics, chemical fiber, stainless steel and high Manganese steel, etc.,
2. make drilling tools, mining tools, crushing tool, measuring gauges, wear parts, cylinder liners, precision bearings, nozzles and metal molds, etc.

**Nickel powder:**

Color: Grey, Irregular shape powder

Packing: in plastic bar or cloth bag, then load in iron drums.

**Application:**

1. It used for making non-ferrous alloy, making high temperature resistant materials and magnetic materials.
2. As chemical reaction hydrogenation catalyst.

| Nickel powder |        |        |        |        |        |
|---------------|--------|--------|--------|--------|--------|
| Ni            | Si     | Fe     | Mn     | Mg     | Pb     |
| ≥99.5         | ≤0.005 | ≤0.006 | ≤0.002 | ≤0.002 | ≤0.002 |
| Al            | Sn     | O      | Zn     | Al     | Sn     |
| ≤0.005        | ≤0.001 | ≤0.16  | ≤0.002 | ≤0.005 | ≤0.001 |

**Nickel sheet metal:**

Purity: 99.97% min.

Color: silver white metal

Grade: Ni200, Ni201, N4, N6

Density: 8.9g/cm<sup>3</sup>

Melting point: 1455°C

Boiling point: 2730°C

Nickel sheet metal

| Item       | Value (%) |
|------------|-----------|
| Purity (%) | 99.97     |
| Cobalt     | 0.050     |
| copper     | 0.001     |
| carbon     | 0.003     |
| iron       | 0.0004    |
| sulfur     | 0.023     |
| arsenic    | 0.001     |
| lead       | 0.0005    |
| zinc       | 0.0001    |

### Silicon manganese alloy:

1. Chemical name: manganese silicon
2. Molecular weight: 54.93
3. Silicon manganese alloy is a kind of bulk solid with metallic luster and it has the specific gravity of 6.0-6.4, melting point of 1517°C , boiling point of 2378°C , melting heat of 7.37KJ/mol and evaporative heat of 22500KJ/mol

| Brand          | Mn    | Si    | C≤  | P≤   |      |      | S≤   |
|----------------|-------|-------|-----|------|------|------|------|
|                |       |       |     | I    | II   | III  |      |
| FeMn64<br>Si27 | 60~67 | 25~28 | 0.5 | 0.10 | 0.15 | 0.25 | 0.04 |
| FeMn67<br>Si23 | 63~70 | 22~25 | 0.7 | 0.10 | 0.15 | 0.25 | 0.04 |
| FeMn68<br>Si22 | 65~72 | 20~23 | 1.2 | 0.10 | 0.15 | 0.25 | 0.04 |
| FeMn64<br>Si23 | 60~67 | 20~25 | 1.2 | 0.10 | 0.15 | 0.25 | 0.04 |
| FeMn68<br>Si18 | 65~72 | 17~22 | 1.8 | 0.10 | 0.15 | 0.25 | 0.04 |
| FeMn64<br>Si18 | 60~67 | 17~20 | 1.8 | 0.10 | 0.15 | 0.25 | 0.04 |
| FeMn68<br>Si16 | 65~72 | 14~17 | 2.5 | 0.10 | 0.15 | 0.25 | 0.04 |
| FeMn64<br>Si18 | 60~67 | 14~17 | 2.5 | 0.20 | 0.25 | 0.30 | 0.05 |