



Customized Size 99.9% Purity Copper Foam For Lithium Battery Cathode Material

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Model Number: Copper foam
- Minimum Order Quantity: 500
- Price: Negotiable
- Packaging Details: Spool package with Carton box, Coil package with polybag
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month



Product Specification

- Product Name: Foam Alloy
- Density: 0.2~0.4g/cm³
- Melting Temperature: 560-700°C
- Feature: High Impact Absorption Ability
- Purity: 98%
- Size: Customers' Requirements
- Thickness: 5-120mm
- Shape: Square And Round
- Highlight: Zr Metal Foam, Ti Metal Foam, Cu copper foam



More Images



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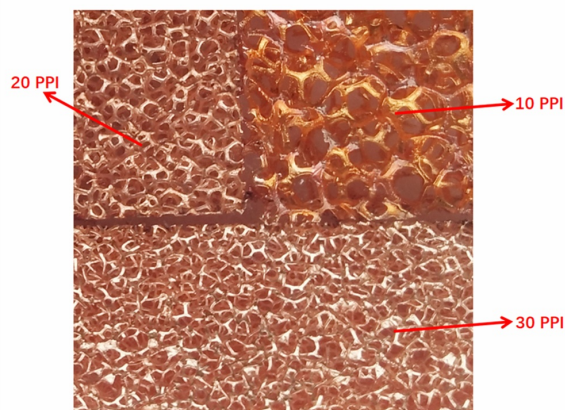
Product Description

Introduction:

Copper foam is a new multifunctional material with a large number of connected or non-connected pores evenly distributed on the copper substrate.

Copper foam has good conductivity and ductility. Compared with nickel foam, the preparation cost is low and the conductivity is good. It can be used to prepare battery negative electrode (carrier) materials, catalyst carriers and electromagnetic shielding materials. In particular, copper foam has some obvious advantages as the base material of battery electrodes, but because the corrosion resistance of copper is not as good as that of nickel, it also limits some of its applications.

Using polyurethane soft foam as the substrate, copper foam with a uniformly distributed three-dimensional network pore structure, high porosity (>95%) and certain tensile strength was prepared through pretreatment, chemical deposition, electrode position, incineration and thermal reduction processes.



Details:

Aperture	0.1mm-10mm(can customized)
Porosity	60%-98%
Through porosity	≥98%
Bulk density	0.1-0.8g/cm ³
PPI	5-130
size	Customized
Tensile Strength	5-18KPa
compressive strength	≥250KPa
mechanical strength	≥2-5KPa
High temperature resistance	≥900°C
Heat transfer coefficient	>6W/(m ² k)

Advantage:

Its air permeability is very high, almost all are connected pores, the specific surface area of the pores is large, and the bulk density of the material is small.

Production Method:

The preparation of metal foam includes powder metallurgy and electroplating. The former makes metal foam by adding a foaming agent to molten metal; the latter replicates metal foam on the polyurethane foam skeleton through an electrodeposition process.

The powder metallurgy method to manufacture metal foam is to add a foaming agent (such as NH₄Cl) to the powder, and the foaming agent volatilizes during sintering, leaving pores. Metal foams with regular shape pores and a porosity up to 95% can be prepared by electrochemical deposition, including foam materials with Cu, Ni, NiCrFe, ZnCu, NiCu, NiCrW, NiFe and other metals and alloys as the skeleton. The metal electrochemically deposited on the porous body is sintered to connect the deposited components into a whole, and the high-porosity metal foam with the required strength has high porosity and can be filled with more substances such as catalysts and electrolytes during use.

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Application:

1. Electrode material.

Due to its good electrical conductivity, foamed copper can be widely used in electrode skeleton materials of new batteries, such as nickel-zinc batteries, electric double-layer capacitors, etc., and foamed copper is expected to be promoted as the electrode current collector of electric double-layer capacitors; in addition, foamed copper

Copper can also be used as an electrode material for electrolytic recovery of copper-containing wastewater, which has broad application prospects.

2. Catalysis.

At present, in many organic chemical reactions, it is attempted to directly replace punched copper plates with copper foam with a large specific surface area as a catalyst for chemical reactions, and using copper foam as a carrier for photo catalytic air purification is also relatively successful.

3. Thermally conductive material.

Blister copper has become an excellent flame-retardant material due to its good thermal conductivity, and has been used in many advanced fire-fighting equipment abroad, especially as a flame insulation device, the effect is better; in addition, people also Using the excellent thermal conductivity and apparent permeability of foamed copper, heat-dissipating motors and electrical appliances are made.

4. Noise reduction and shielding device.

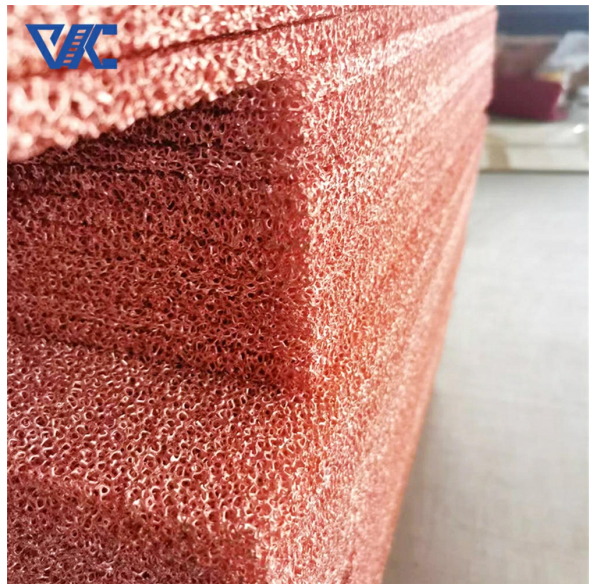
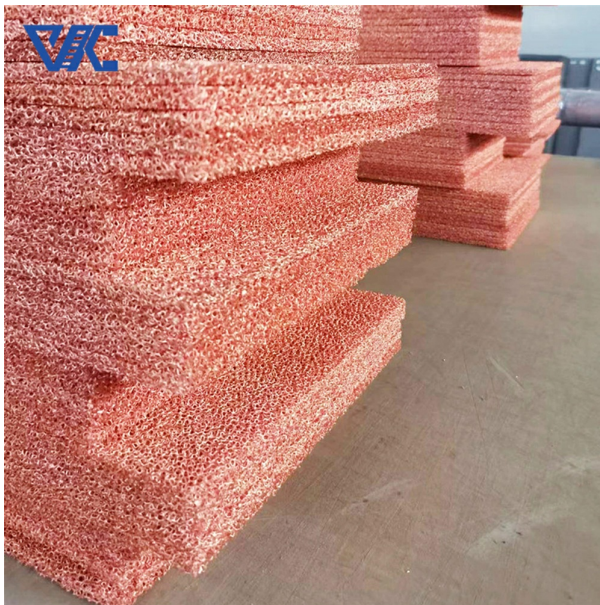
The sound wave is diffusely reflected on the surface of copper foam, and the noise reduction effect is achieved through the principles of expansion and micropore noise reduction; the shielding performance of copper is close to that of silver, and it is an electromagnetic shielding material with excellent performance.

5. Filter material.

Copper foam products have structural properties and are basically harmless to the human body, and have been successfully used in medical filter materials; at the same time, copper foam also has a good application prospect in water purification equipment.

6. Materials that buffer fluid pressure.

The dispersing and buffering effect of copper foam on the fluid makes it a pressure release protection device for various pressure gauges with good results.



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