Copper Foam

ISO 9001:2015 CERTIFIED COMPANY

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Copper Foam

The key properties of metal foam are as follows:

The copper foam exhibits good electrical conductive nature and ductility and has a lower preparation cost. It can be used for preparing a battery negative electrode (carrier) material, a catalyst carrier, and electromagnetic shielding material. In particular, the use of copper foam as a base material for batteries as electrodes has some significant advantages, but its corrosion resistance is not as good as that of nickel, which limits its applications.

Therefore, this material has the potential in industrial applications such as porous electrodes in rechargeable batteries, fuel cells, heat exchangers, catalytic substrates for chemical reactions and filtration applications. For such applications, the pore structure is considered a key factor for the sustainable design of high-performance porous components and should, therefore, exhibit a high degree of porosity uniformity and controllable porosity distribution. The porous copper foam may be used as 3-D templates for the preparation of other functional materials in nanostructure forms.

Copper foam exhibits excellent electrical conductivity which makes copper foam capable of electrode frame materials of new batteries such as nickel-zinc batteries and electric double-layer capacitors. Currently, foamed copper has been utilized by many nickel-zinc battery manufacturers and put into mass production. In many organic chemical reactions, the copper plate is directly replaced with copper foam with a large specific surface area as a chemical reaction catalyst. It is also utilized as a photocatalytic air purification carrier.

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Technical Specification

1. Metal Copper Foam
   - Stock No: NS6130-10-1005,1006
   - Length: 500mm
   - Width: 500mm
   - Thickness: 1mm
   - Pore Size: 0.1mm-1mm (110 ppi)
   - Porosity: 50%-98%

2. Metallic Copper Foam
   - Stock No: NS6130-10-1007
   - Length: 500mm
   - Width: 500mm
   - Thickness: 2mm
   - PPI: 50
   - Porosity: >70%
Copper Foam Heat Exchanger
- Stock No: NS6130-10-1009
- Length: 500mm
- Width: 500mm
- Thickness: 3mm
- Pore Size: 0.1mm-1mm (110 ppi)
- Porosity: 50%-98%

Pure Metal Copper Foam
- Stock No: NS6130-10-1010
- Length: 500mm
- Width: 500mm
- Thickness: 4mm
- PPI: 50
- Porosity: >70%

Copper Metal Foam
- Stock No: NS6130-10-1011
- Length: 500mm
- Width: 500mm
- Thickness: 5mm
- Pore Size: 50 PPI
- Porosity: >70%

Copper Metal Foam
- Stock No: NS6130-10-1228
- Length: 50mm
- Width: 50mm
- Thickness: 2A5mm
- Pore Size: 20 PPI

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Propeties of Copper Metal Foam

The key properties of metal foam are as follows:

- The key properties of the metal foam are as follows:
- Ultra-light material (75–95% of the volume consists of void spaces)
- Very high porosity
- High compression strengths combined with good energy absorption characteristics
- Thermal conductivity is low
- High stiffness
- High melting point
- Better damping
- Thermal insulation
CHARACTERISTICS
OF COPPER METAL FOAM

Ultra-lightweight copper metal foams possess unique microstructural characteristics and physical properties that make them attractive for automotive, as well as other applications:

✔ Ultra-lightweight foam
✔ Alluring porous structure and the microstructures tailorable over the range 40 to 80% porosity
✔ High stiffness-to-weight and strength-to-weight ratios
✔ Ability to absorb energy from an impact, crash, and explosive blasts
✔ Vibration damping and sound absorption
✔ Fire resistance and thermal insulating properties
Applications

Of Copper Metal Foam

✓ Applied in flame isolated equipment
✓ Utilizable as a catalyst carrier
✓ Prominent electromagnetic shielding materials
✓ In water purification process employed as filter material
✓ Fluid pressure cushioning material
✓ Foam utilized as silencer since terminating the sound
✓ Foam copper electrolytic recovery of copper waste used as electrode material
Ordering Information
and Stock Availability

✓ Product: Copper Foam
✓ Stock Availability: Available
✓ Distribution: Global
✓ Packing Sizes: 1 Piece, 2 Piece, 5 Piece, 10 Piece, & Bulk Orders

DEALS WITH

Our Copper Metal Foams purchased by well-established and spectacular research centres and organizations:

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