

The ChemWhat logo features the brand name in a bold, white, sans-serif font. The 'W' is stylized with a gap in the middle. A registered trademark symbol (®) is positioned at the top right of the 't'.

ChemWhat®

ADVANCED METAL & NANO POWDER MATERIALS

PRODUCT CATALOG

Silver-Coated Copper Powder & Nano Silver Powder

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ABOUT THIS CATALOG

Specifications are provided for reference only. Final factory specifications for all products are established jointly with each customer; see product-page disclaimers for details.

— SECTION 01 —

Silver-Coated Copper Powder

High-dispersion spherical and flake Ag@Cu powders for conductive pastes

01

SILVER-COATED COPPER POWDER – SPHERICAL

High-Dispersion, High-Tap-Density Spherical Ag@Cu Powder

This grade of silver-coated copper powder features high sphericity, a narrow and concentrated particle size distribution, and a smooth surface. The silver layer is continuous, dense, and strongly adherent. Silver content can be precisely tailored within the 5%–25% range according to customer process requirements. Downstream testing shows excellent electrical conductivity, acid resistance, oxidation resistance, and high-temperature resistance. It is primarily used as a low-temperature conductive paste for heterojunction (HJT) photovoltaic cells, and is also suitable for high-end low-temperature conductive circuit pastes, electromagnetic shielding pastes, and thermally conductive heat-dissipation pastes. The powder surface is specifically modified according to the downstream paste or adhesive system to achieve better compatibility with different pastes and adhesive systems.

Spherical Cu@Ag	Tap Density TD	Specific Surface Area SSA	D10	D50	D90	Ag wt%
Spec Range	4.0~6.5	0.15~0.35	2.0~4.0	4.0~6.0	6.5~8.5	5.0~25.0
A1E	5.05	0.25	3.25	5.06	7.76	10.0
A1-1	5.01	0.26	3.29	4.87	7.02	10.0
A1-ZG11	5.76	0.21	2.76	4.62	8.02	10.0

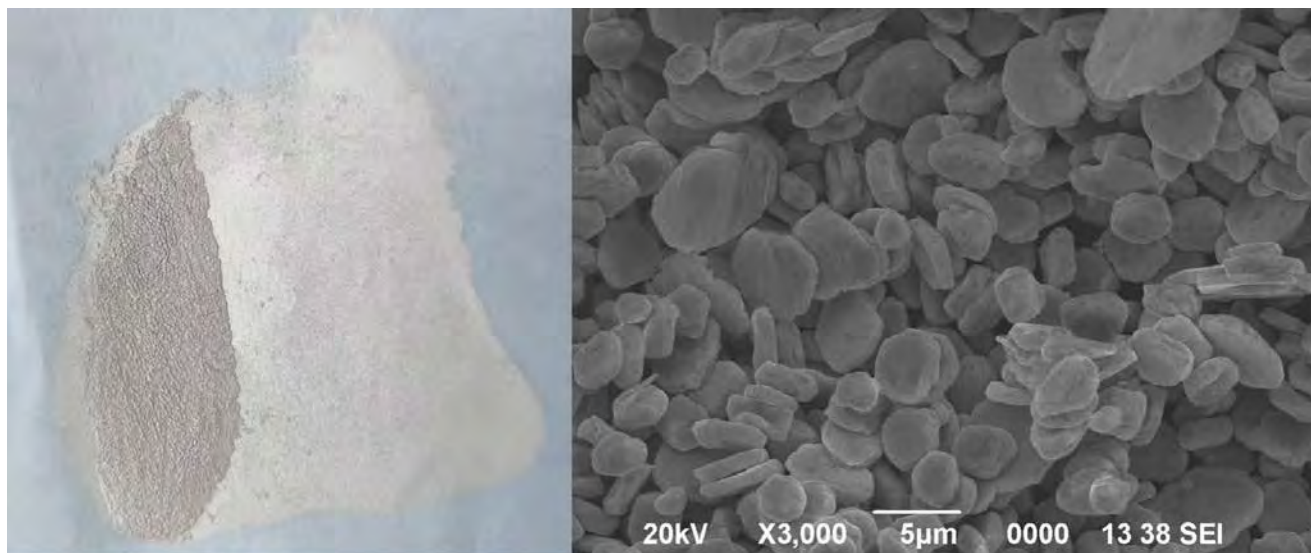


SILVER-COATED COPPER POWDER – FLAKE

High-Dispersion, High-Conductivity Flake Ag@Cu Powder

This grade of silver-coated copper powder has a flake-shaped morphology, with a continuous, dense, and strongly adherent silver layer. Silver content can be flexibly adjusted within the 5%–30% range according to customer process requirements, and the flake thickness can also be tailored to customer needs. Downstream testing shows excellent electrical conductivity, acid resistance, oxidation resistance, and high-temperature resistance. It can be used in conductive adhesives, low-temperature conductive pastes, electromagnetic shielding, radar-absorbing/stealth coating pastes, and thermally conductive heat-dissipation coating pastes, among other applications. The powder surface is specifically modified according to the downstream paste or adhesive system to achieve better compatibility with different pastes and adhesive systems.

Flake Cu@Ag	Tap Density TD	Specific Surface Area SSA	D10	D50	D90	Ag wt%
Spec Range	2.0~4.5	0.2~1.5	1.5~4.0	3.5~7.0	< 15.0	5.0~30.0
FAC-P002	4.23	0.48	2.51	4.49	8.57	15.0%
FAC-P003	2.96	0.61	2.51	5.53	12.79	15.0%



— SECTION 02 —

Nano Silver Powder

NP-30 and NP-80 monodisperse spherical silver powders, 30–100 nm

02

NANO SILVER POWDER – NP-30

Nano Silver Powder

NP-30 (30 nm)

APPLICATION RANGE

Low-temperature sintering pastes;
low-silver-content, high-conductivity pastes;
touchscreen pastes.

PRODUCT DESCRIPTION

Medium tap density, highly dispersed,
spherical nano silver powder.

Average particle size distribution measured by
Malvern 2000 MU laser particle size analyzer:
N/A

PHYSICAL PROPERTIES

TAP DENSITY 2.0 – 4.0 g/cm³

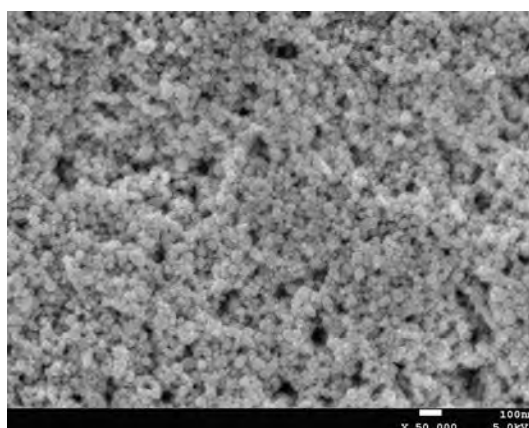
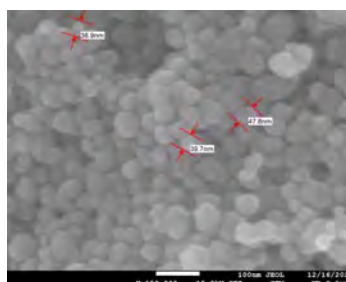
SPECIFIC SURFACE AREA 10.0 – 16.0 m²/g

MOISTURE (120°C / 1 h) < 1.0%

LOSS ON IGNITION (538°C / 1 h) < 2.5%

PRODUCT FORM

Typically dispersed in a specified solvent, such as
terpineol, isopropyl alcohol (IPA), or ethanol.

**SUPPLEMENTARY SEM PARTICLE-SIZE MEASUREMENTS**

SEM measurement — avg. ~42 nm
(X150,000)

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NANO SILVER POWDER – NP-80

Nano Silver Powder NP-80 (50–100 nm)

APPLICATION RANGE

Monodisperse spherical silver powder with an average particle size of 80 nm. Primarily used as an additive to enhance sintering activity, and in medical antibacterial applications.

PRODUCT DESCRIPTION

Medium tap density, nano-scale monodisperse spherical silver powder.

Average particle size distribution measured by Malvern 2000 MU laser particle size analyzer:
N/A

PHYSICAL PROPERTIES

TAP DENSITY 2.0 – 3.0 g/cm³

BULK DENSITY 0.7 – 1.5 g/cm³

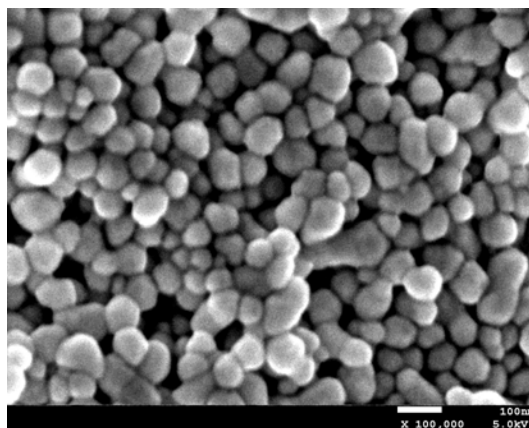
SPECIFIC SURFACE AREA 8.0 – 10.0 m²/g

MOISTURE (120°C / 1 h) < 0.2%

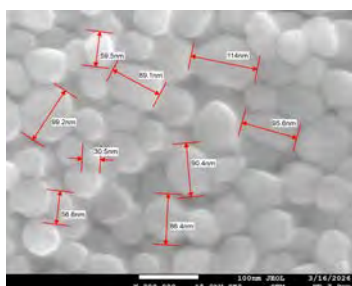
LOSS ON IGNITION (538°C / 1 h) < 2.8%

PRODUCT FORM

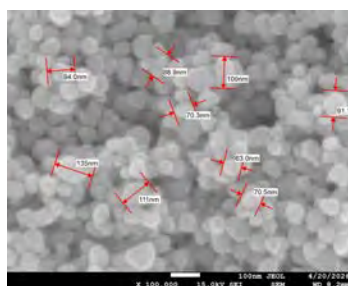
Typically dispersed in a specified solvent, such as terpineol, isopropyl alcohol (IPA), or ethanol.



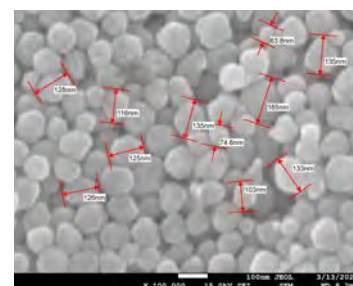
SUPPLEMENTARY SEM PARTICLE-SIZE MEASUREMENTS



SEM measurement — avg. ~80 nm
(X200,000)



SEM measurement — avg. ~93 nm
(X100,000)



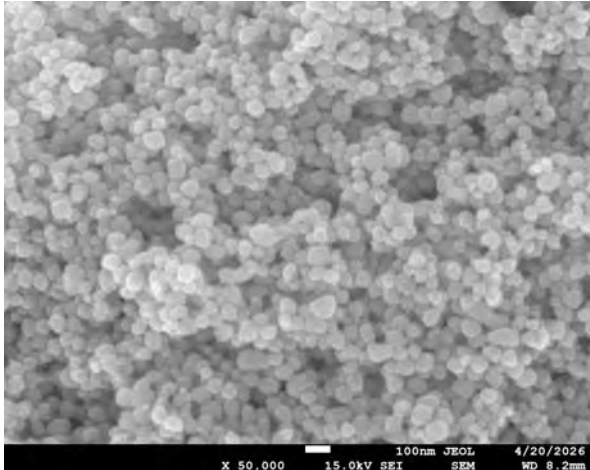
SEM measurement — avg. ~117 nm
(X100,000)

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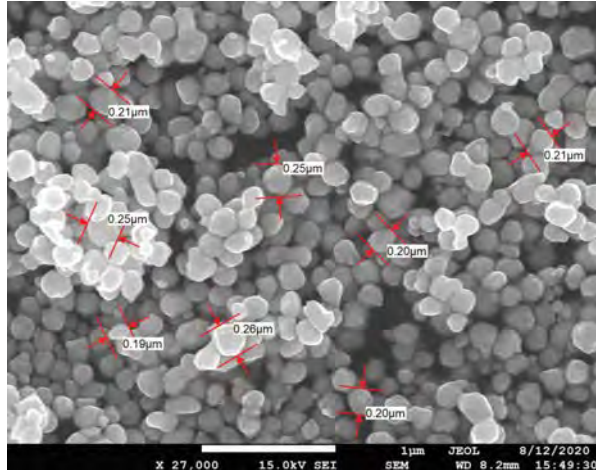
NANO SILVER POWDER – APPENDIX

Additional SEM Characterization

The SEM images below provide additional particle morphology and size-distribution reference data for the NP series nano silver powder line, illustrating batch-to-batch variation across the 30–100 nm range.



General particle morphology, NP series (X50,000)



SEM measurement — avg. ~221 nm, coarser reference batch (X27,000)

ChemWhat®

Advanced Metal & Nano Powder Materials
