

Conductive Materials



Ag Powder

for Solar cell and Chip Electrodes
for All Solid State Batteries
for High Temperature Sintering

Item		Sub-Micron Size			Highly Dispersed Powder				
		HP-0702	HP-0704	HP-0706	HP-0710	HP-0712	HP-0710S	HP-0725S	HP-0725P
①PSD (μm)	D10	≥ 0.07	≥ 0.10	≥ 0.15	≥ 0.40	≥ 0.40	≤ 1.00	≤ 2.00	≤ 2.00
	D50	0.25 ± 0.10	0.45 ± 0.15	0.60 ± 0.20	1.10 ± 0.20	1.30 ± 0.30	1.20 ± 0.30	2.50 ± 0.50	2.50 ± 1.00
	D90	≤ 0.60	≤ 1.20	≤ 2.00	≤ 2.80	≤ 3.20	4.00 ± 0.50	4.50 ± 1.50	5.00 ± 1.50
Weight Loss (%)		≤ 0.80	≤ 0.80	≤ 0.80	≤ 0.80	≤ 0.80	≤ 0.80	≤ 0.80	≤ 0.80
②SSA (m^2/g)		≥ 1.50	≥ 1.50	≥ 2.00	≤ 1.00	≤ 0.80	≤ 0.80	≤ 0.80	≤ 0.80
③T.D. (g/cc)		≥ 3.00	≥ 3.00	≥ 3.00	≥ 3.00	≥ 3.00	≥ 3.50	≥ 3.50	≥ 4.50
Application		Solar Cell, Chip			Solar Cell, Chip		Chip	Chip	Chip

① PSD : Particle Size Distribution

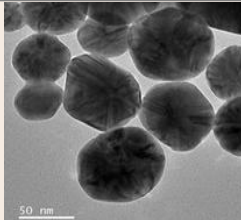
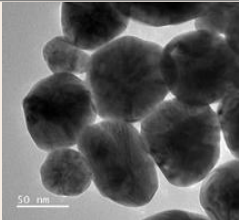
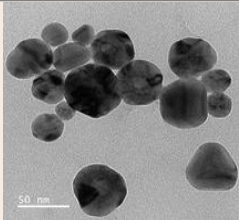
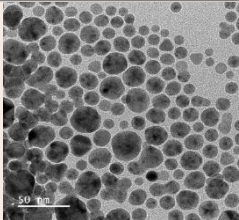
② SSA : Specific Surface Area

③ T.D. : Tap Density (1,000 times)

Detailed specs available upon request
hsukim@ltmetal.co.kr

Ag Nano Powder

for Power Semiconductor Modules
for Low Temperature sintering

Item	HP N4060	HP N4060EA	HP N4060 Wet	HP N1030
TEM				
Appearance	Brown	Brown	Greenish brown	Blue Brown
Particle Size(nm)	60 ± 20	60 ± 20	60 ± 20	20 ± 10
Wt. Loss (%)	0.5 ± 0.2	0.5 ± 0.2	-	1.5 ± 0.5
Sintering Temperature (°C)	200 ± 50	200 ± 50	200 ± 50	-
Shear Strength (MPa)	≥ 40	≥ 40	≥ 40	-
Ag Content (%)	-	-	85.0 ± 1.0	-
Application	Powder Semiconductor Device, All Solid-State Battery			All Solid-State Battery

Ag Flake

for Low Temperature Curing
(TSP, EMI Shield, Die Attach)

Item		Micron Size					*Thin Type Flake
		HP-F15J	HP-0202END	HP-0202E	HP-0202F1	HP-0202F3	HP0202F1T
① PSD (μm)	D10	≤ 1.00	≤ 1.50	≤ 1.50	≤ 4.00	≤ 3.00	≤ 4.00
	D50	1.00 ± 0.50	1.50 ± 0.50	2.50 ± 0.50	7.50 ± 1.00	5.50 ± 1.00	7.50 ± 1.00
	D90	≤ 4.00	≤ 6.00	≤ 8.00	≤ 20.00	≤ 15.00	≤ 20.00
Weight Loss (%)		≤ 0.80	≤ 1.00	≤ 1.00	≤ 0.80	≤ 0.80	≤ 0.80
② SSA (m ² /g)		≤ 3.50	≤ 3.50	≤ 3.50	≥ 2.00	≥ 2.00	≥ 2.00
③ T.D. (g/cc)		3.50 ± 0.50	3.50 ± 0.50	3.50 ± 0.50	3.50 ± 0.50	3.50 ± 0.50	2.20 ± 0.50
Application		TSP Ceramics Heater	PCB Through Hole RFID, EMI, TSP		Desktop MTS, FPCB		

*Thickness 800 → 300 nm ↓

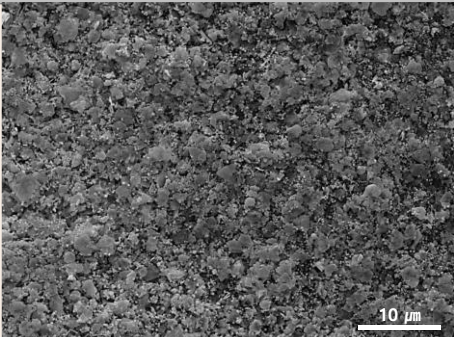
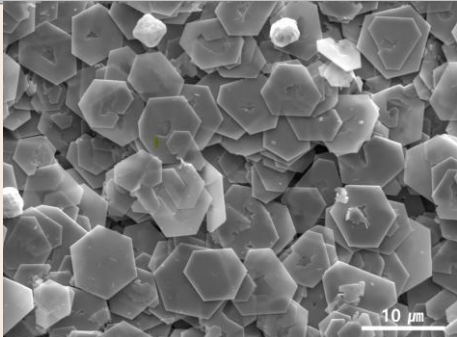
① PSD : Particle Size Distribution ② SSA : Specific Surface Area ③ T.D. : Tap Density (1,000 times)

Detailed specs available upon request

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Polygonal type Ag Plate

for Low Temperature Curing
(TSP. EMI Shield, Die Attach)

Item		HP0103P	HP0305P
SEM			
Major Axis (μm)		1 – 3 μm	3 – 5 μm
① PSD (μm)	D10	≤ 2.00	≤ 4.00
	D50	2.00 ± 1.00	4.00 ± 1.50
	D90	≤ 5.00	≤ 10.00
Weight Loss (%)		≤ 1.00	≤ 1.00
② SSA (m ² /g)		≤ 2.00	≤ 2.00
③ T.D. (g/cc)		2.50 ± 1.00	2.50 ± 1.00
Application		Powder Semiconductor Device	

① PSD : Particle Size Distribution

② SSA : Specific Surface Area

③ T.D. : Tap Density (1,000 times)

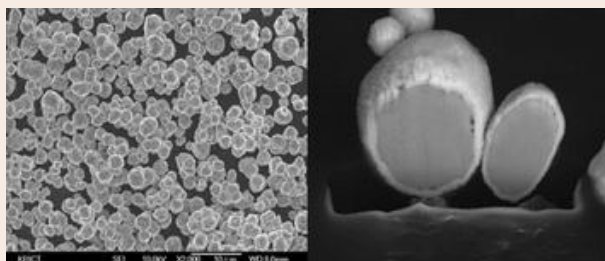
Ag-Coated Cu Powder

Ag-Coated Cu Flake

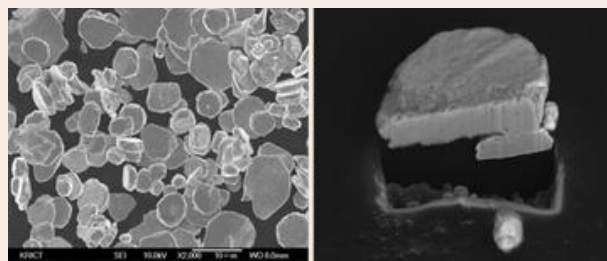
Item		Ag coated Cu Powder	Ag coated Cu Flake		
		HP-0410P	HP-0410F05	HP-0413F05	HP-0425F05
① PSD (μm)	D10	≤ 2.5	≤ 6.0	≤ 6.0	≤ 6.0
	D50	3.0 ~ 5.0	9.0 ~ 12.0	9.0 ~ 12.0	9.0 ~ 12.0
	D90	≤ 15.0	≤ 20.0	≤ 20.0	≤ 20.0
Ag Content (%)		10.0 $\pm$ 1.0	10.0 $\pm$ 1.0	13.0 $\pm$ 1.0	25.0 $\pm$ 1.0
②SSA (m^2/g)		≤ 0.6	≤ 0.8	≤ 1.0	≤ 0.8
③T.D. (g/cc)		4.0 ~ 6.0	3.0 ~ 4.0	3.0 ~ 4.0	3.0 ~ 4.0

① PSD : Particle Size Distribution ② SSA : Specific Surface Area ③ T.D. : Tap Density (1,000 times)

AgCu Powder



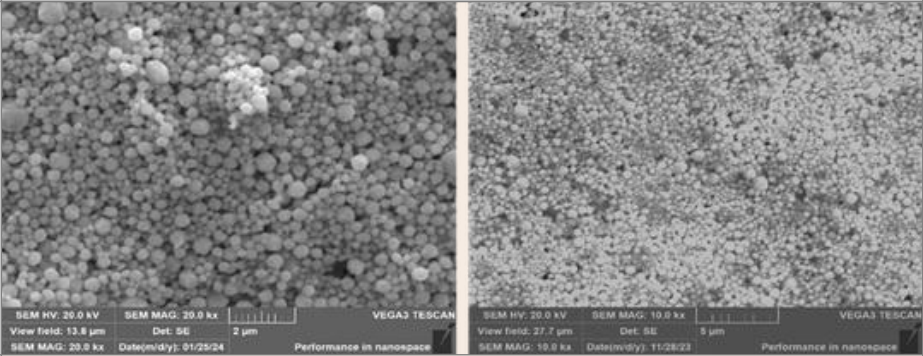
AgCu Flake



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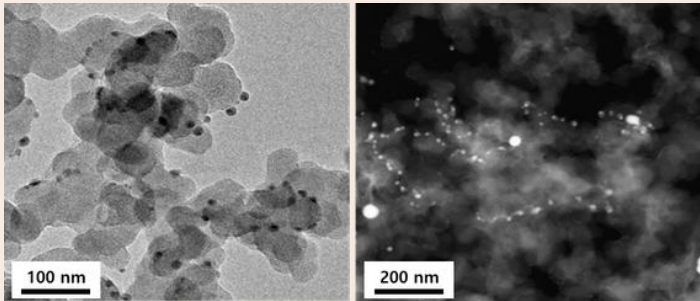
Ag Micron Powder

for All-Solid-State Batteries

Item		HP 0702
SEM		
Particle Size Distribution (μm)	D10	≥ 0.05
	D50	0.20 ± 0.05
	D90	≤ 1.00
Wt. Loss (%)		≤ 0.80
Tap Density (g/cc)		≥ 3.00
Specific Surface Area (m²/g)		≥ 1.50

Ag/C Powder

for All-Solid-State Battery Anode

Item	Ag/C
TEM	
Appearance	Black
Ag Particle Size (nm)	20 ± 10
Ag Contents (%)	15.0 ± 0.5
Carbon Particle Size (μm)	45 ± 15
Carbon Surface Area (m^2/g)	50 ± 10
Carbon Ig/ID ratio	0.93

Detailed specs available upon request
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