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Specialized in Metal Powders
www.cnpcpowder.com



CNPC POWDER

At the front of high quality Materials

Over the years, **CNPC POWDER** has made a primary focus, the development of materials that exceed client requirements for metallurgical materials.

This focus on exceeding expectations has given us the ability to produce an ever-expanding catalog of powders, and a depth and breadth of knowledge in PM, Diamond tooling, Electronics, Friction and Refractory materials, and MIM, which our clients can leverage to improve their processes and advance their business.

Now, **CNPC POWDER** has been able to forge new connections with North and South American powder users as well as a growing connection to Europe, which has provided us with a global reach.

As we develop new powders for advanced manufacturing like additive manufacturing, our new AM facility and R&D Center will allow for continued support and innovation for our industry.



Membership of MPIF



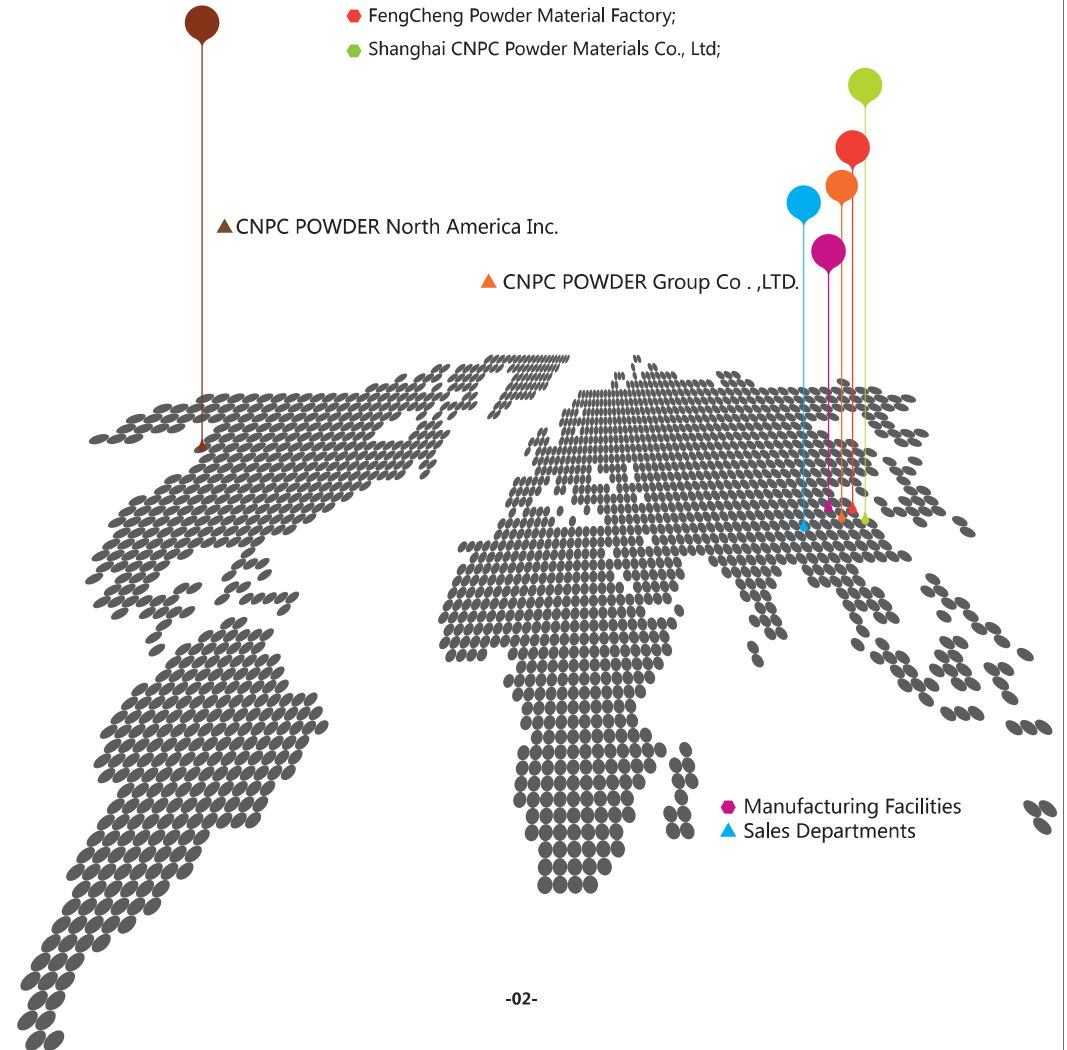
Membership of EPMA



POSITIONED

With a global capacity

- Anhui CNPC POWDER New Material Co., Ltd;
- Anhui CNPC Steel Technology Co.,Ltd;
- FengCheng Powder Material Factory;
- Shanghai CNPC Powder Materials Co., Ltd;



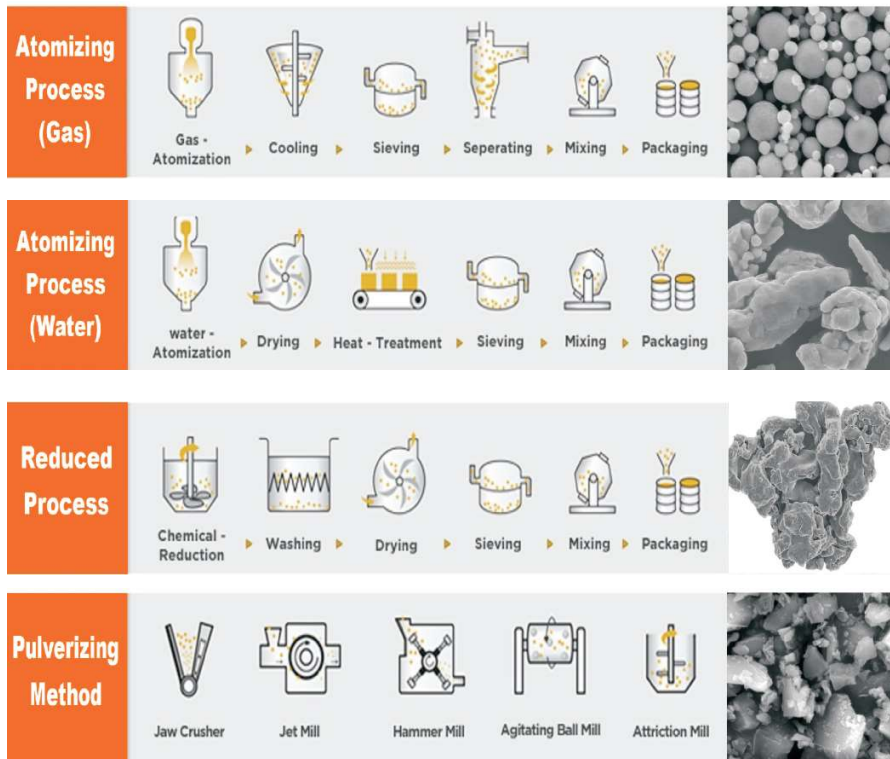
▲ CNPC POWDER North America Inc.

▲ CNPC POWDER Group Co., LTD.

- Manufacturing Facilities
- ▲ Sales Departments

MANUFACTURING PROCESS

At **CNPC POWDER**, we produce all our products with advanced technology and skilled manufacturing processes. We use a variety of production technologies to produce our powders.



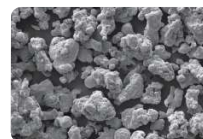
CHARACTERIZATION DATA

- Chemical Composition
- Oxygen Content
- Particle Size Distribution (Sieving & Laser Diffraction)
- Particle Shape
- Flow Speed
- Apparent Density

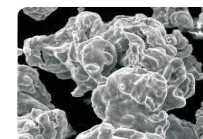


CNPC POWDER Metal Powder Products

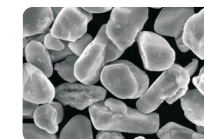
Produced in many different grades for varieties of applications.
Following are some of the most widely used powders,
classified by purity, production method, particle size and density.



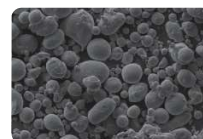
Atomized Iron



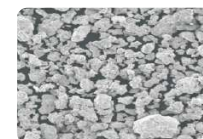
Reduced Iron



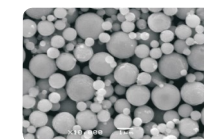
Water Atomized SS Powder



Nickel Powder



Water Atomized Copper



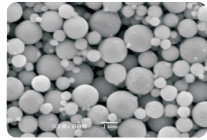
Gas Atomized Copper

IRON & IRON ALLOY POWDERS

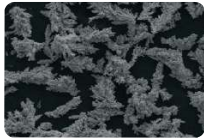
Product	Grade	Composition (%)								Physical Properties			Particle Size(%)		
		Fe≥	C≤	S≤	O≤	Al≤	P≤	Mn≤	Si≤	A.D.g/cm ³	GD600 g/cm ³	Flow,sec/50g	+100(150μm)	+200(75μm)	+325(45μm)
Reduced Iron Powder	CNPC-FE80	99	0.02	0.01	0.3	0.35	0.01	0.1	0.05	2.3-2.8	≥6.7	≤30	≤10	≤45	85-95
	CNPC-FE100	99	0.02	0.01	0.3	0.35	0.01	0.1	0.05		≥6.8	≤30	≤3	≤45	85-95
	CNPC-FE200	99	0.02	0.01	0.35	0.35	0.02	0.1	0.1		≥6.8	≤35	-	≤8	≤55
	CNPC-FE300	99	0.02	0.01	0.4	0.35	0.02	0.1	0.1	2.5-2.8	≥6.8	≤38	-	-	≤8
	CNPC-FE400	99	0.02	0.01	0.4	0.35	0.02	0.1	0.1		≥6.8	≤40	-	-	≤2
	CNPC-HFE985	98.5	0.05	0.02	0.4	0.3	0.03	0.35	0.12	2.3-2.6	≥6.6	≤34	≤5	≤45	70-95
CNPC-HFE98	98	0.05	0.02	0.5	0.3	0.04	0.4	0.15	≥6.5						
CNPC-HFE97	97	0.1	0.04	0.8	0.4	0.06	0.7	0.3	≥6.2						
CNPC-AFE100	99.5	0.01	0.01	0.15	0.1	0.01	0.12	0.03	≥7.1		≤25				
Atomized Iron Powder	CNPC-AFE200	99.5	0.01	0.02	0.2	0.2	0.01	0.12	0.05	2.9-3.1	-	-	-	≤8	-
	CNPC-AFE300	99.5	0.01	0.02	0.23	0.2	0.01	0.12	0.05		-	-	-	-	≤8
	CNPC-FE40.30	99	0.01	0.01	0.2	-	0.01	0.12	0.05	2.9-3.2	-	-	≤90	-	-
	CNPC-FE40.37	99	0.01	0.01	0.2	-	0.01	0.12	0.05	3.5-3.8	-	-	-	-	-
Ultrafine Iron Powder	CNPC-UFE100	99	0.03	0.01	0.8	-	-	-	-	1-1.5	D50: 2-4μm				
	CNPC-UFE200	99	0.03	0.01	0.7	-	-	-	-	1-1.8	D50: 4-5μm				
	CNPC-UFE300	99	0.03	0.01	0.5	-	-	-	-	1.2-1.8	D50: 5-7μm				
	CNPC-UFE400	99	0.03	0.01	0.7	-	-	-	-	1.9-2.5	D50: 7-9μm				
Iron Alloy Powder	CNPC-FEAB	Bal.	Cu 1.3-1.7, Ni 1.7-2.2, Mo 0.4-0.6						2.9-3.1	≥7.1	≤25	≤3	≤45	85-95	
	CNPC-FEAE	Bal.	Cu 1.3-1.7, Ni 3.6-4.4, Mo 0.4-0.6												
	CNPC-FeCu30	Bal.	Fe 70, Cu 30						3.2-3.8	-	-	-	≤8	45-60	
	CNPC-FeCu40	Bal.	Fe 80, Cu 20												
	CNPC-FeCuNiSn	Bal.	Fe 85, Cu 10, Ni 3, Sn 2						2.4-2.7	-	-	-	≤8	45-60	
	CNPC-FeCuCo	Bal.	Cu 10-60, Co 4-25												
CNPC-FeCo	Bal.	Fe 82 Co18, Fe50 Co50						D50: 8-15μm							
Ultrafine Iron Alloy Powder	CNPC-FeCu	Bal.	Fe 90, Cu 10						1.2-1.4	D50:4-6um	-	-	-	-	-
	CNPC-FeCuNiSn	Bal.	Fe 85, Cu 10, Ni 3, Sn 2						1.2-1.3						
	CNPC-FeCuCo	Bal.	Fe 70, Cu 20, Co10						1.1-1.3						
	CNPC-FeCuNi	Bal.	Fe 87, Cu 10, Ni 3						0.8-1.5						
	CNPC-FeCuSn	Bal.	Fe 88, Cu10, Sn2						1-1.5						
	CNPC-FeCuSnCo	Bal.	Fe 77, Cu 18, Sn 2, Co 3						1.2-1.5						

COPPER & COPPER ALLOY POWDERS

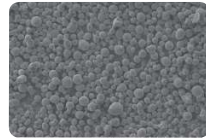
Product	Grade	Composition (%)	O(%)	A.D.g/cm ³	Particle Size				
					+100(150μm)	+140(106μm)	+200(75μm)	+325(45μm)	-325(45μm)
Gas Atomized Copper Powder	CNPC-GCu100	Cu99.7min	0.1max	4.8-5.2	≤5	Bal.			≤10
	CNPC-GCu200				-	≤1	≤5	≤30	Bal.
	CNPC-GCu300				-	-	≤1	≤10	Bal.
	CNPC-GCu400				-	-	-	-	≥95
Water Atomized Copper Powder	CNPC-WCu100	Cu99.7min	0.3max	2.0-4.2	≤5	Bal.			≤10
	CNPC-WCu200				-	≤1	≤5	≤30	Bal.
	CNPC-WCu300				-	-	≤1	≤10	Bal.
	CNPC-WCu400				-	-	-	-	≥95
Electrolytic Copper Powder	CNPC-Cu200	Cu99.7min	0.3max	1.1-1.9	-	≤1	≤5	≤30	Bal.
	CNPC-Cu300				-	-	≤1	≤10	Bal.
	CNPC-Cu400				-	-	-	-	≥95
Copper Alloy Powder	CNPC-CuSn10	Cu90, Sn10	0.3max	3.0-3.8	100mesh, 200mesh, 300mesh				
	CNPC-CuSn15	Cu85, Sn15							
	CNPC-CuSn20	Cu80, Sn20							
	CNPC-CuZn20	Cu80, Zn20							
	CNPC-CuZn30	Cu70, Zn30							
	CNPC-CuSn6Zn6Pb3	Cu85, Sn6, Zn6, Pb3							
CNPC-CuSn10Pb10	Cu80, Sn10, Pb10								
CNPC-CuPb24Sn1	Pb 22-27, Sn 0.8-1.2								
CNPC-CuPb24Sn4	Pb 22-27, Sn 3.5-4.2								
Ultrafine Copper Powder	CNPC-Ucu100	Cu99min	0.5max	2.0-2.8	D50:8-10μm, D50:4-6um				
	CNPC-Ucu200		0.6max	0.5-1.0	D50:1-3μm				
	CNPC-Ucu300		0.7max		D50:0.5-1μm				
	CNPC-Ucu400		0.8max		D50:0.3-0.5μm				
Ultrafine Copper Alloy Powder	CNPC-CuSn10	Cu90, Sn10	0.6max		0.7-1.0	D50:4-6um			
	CNPC-CuSn15	Cu85, Sn15							
	CNPC-CuSn20	Cu80, Sn20							
	CNPC-CuSn30	Cu70, Sn30							
	CNPC-CuSn40	Cu60, Sn40							
	CNPC-CuCoSn	Cu72, Co25, Sn3							



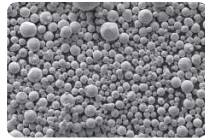
Ultrafine Copper



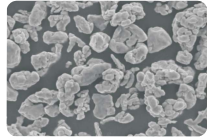
Electrolytic Copper



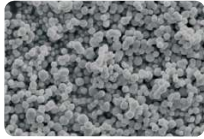
Aluminum Powder



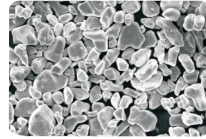
Gas Atomized SS Powder



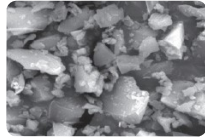
Bronze Powder



Tin Powder



Lead Powder



Silicon Powder

STAINLESS STEEL POWDERS

Product	Grade	Composition (%)	O (%)	A.D.g/cm ³	Particle Size
Gas Atomized Stainless Steel Powder	CNPC-SS304L	Cr18-20, Ni8-12, C 0.03	0.08max	3.0-5.0	100mesh, 200mesh, 300mesh D50:10-13µm
	CNPC-SS316L	Cr16-18, Ni10-14, Mo2-3, C 0.03			
	CNPC-SS17-4PH	Cr15.5-17.5, Ni3-5, Cu3-5Nb0.15-0.45			
	CNPC-SS15-5PH	Cr14-15.5, Ni2.5-5.5, Cu2.5-4.5, Nb0.15-0.45			
	CNPC-SS420	Cr12-14, C0.2-0.4			
	CNPC-SS430	Cr16-18, C -0.12			
	CNPC-SS440	Cr16-18, C 0.95-1.25			
Water Atomized Stainless Steel Powder	CNPC-SS304(L)	Cr18-20, Ni8-12, C 0.03-0.08	0.45max	2.5-3.1	100mesh, 200mesh, 300mesh D50:10-13µm
	CNPC-SS316(L)	Cr16-18, Ni10-14, Mo2-3, C 0.03-0.08			
	CNPC-SS410	Cr11.5-13.5, C 0.2			
	CNPC-SS420	Cr12-14, C0.2-0.4			
	CNPC-SS430	Cr16-18, C -0.12			
CNPC-SS440	Cr16-18, C 0.95-1.25				
Ultrafine Stainless Steel Powder	CNPC-SS304	Cr18-20, Ni8-12, C 0.03	0.45max	2.0-3.0	D50:5-8µm, D50:1-3µm, D50:0.5-1µm
	CNPC-SS316	Cr16-18, Ni10-14, Mo2-3, C 0.03			
	CNPC-SS17-4PH	Cr15.5-17.5, Ni3-5, Cu3-5Nb0.15-0.45			
	CNPC-SS420	Cr12-14, C0.2-0.4			
	CNPC-SS430	Cr16-18, C -0.12			
CNPC-SS440	Cr16-18, C 0.95-1.25				

MOLD STEELS

Product	Grade	Composition (%)	O (%)	A.D.g/cm ³	Particle Size
Mold Steel Powder	CNPC-18Ni300	Ni18-19, Mo4.6-5.2, C0.8-5-9.5, Ti0.5-0.8	0.45max	3.0-5.0	100mesh, 200mesh, 300mesh D50:10-13µm
	CNPC-H13	Cr4.7-5.3, Mo1.1-1.7, V0.8-1.2, C0.32-0.45			
	CNPC-M2	Cr3.8-4.4, Mo4.5-5.5, W5.6-7, V1.7-2.2			
	CNPC-D2	Cr11-13, Mo0.8-1.2, V0.2-0.5, C1.4-1.6			

SILICON POWDERS

Product	Grade	Composition (%)	O (%)	A.D.g/cm ³	Particle Size
Silicon Powder	CNPC-2NSi	Si 99min	0.5max	0.8-1.3	D50:38-45µm, D50:18-25µm, D50:8-12µm, D50:4-6µm, D50:1-3µm, D50:0.5-1µm
	CNPC-3NSi	Si 99.9min			
	CNPC-4NSi	Si 99.99min			

NICKEL POWDERS

Product	Grade	Composition (%)	O(%)	A.D.g/cm ³	Particle Size				
					+100(150µm)	+140(106µm)	+200(75µm)	+325(45µm)	+325(45µm)
Nickel Powder	CNPC-Ni100	Ni99.8min	0.3max	3.5-4.5	≤5	Bal.			≤10
	CNPC-Ni200				-	≤1	≤5	≤30	Bal.
	CNPC-Ni300				-	-	≤1	≤10	Bal.
	CNPC-4Ni100				D50: 10-15µm				
Ultrafine Nickel Powder	CNPC-UNI100	Ni99.8min	0.5max	0.5-1.0	D50:1-3µm				
	CNPC-UNI200				D50:0.5-1µm				
	CNPC-UNI300				D50:0.3-0.5µm				
	CNPC-UNI400				D50:0.1-0.3µm				

ALUMINUM & ALUMINUM ALLOY POWDERS

Product	Grade	Composition (%)	O(%)	A.D.g/cm ³	Particle Size
Aluminum Powder	CNPC-Al100	Al99.8min	0.3max	0.8-1.2	D50: 30-50µm
	CNPC-Al15				D50: 10-15µm
	CNPC-Al5				D50: 4-5µm
	CNPC-Al2				D50: 1-3µm
Aluminum Alloy Powder	CNPC-AISI10Mg	Si 9-11, Mg 0.3-0.5, Al Bal	0.15max		50-150µm, 20-60µm, 15-53µm, D50 9-12µm
	CNPC-AISI7Mg	Si 6-8, Mg 0.3-0.6, Al Bal			
	CNPC-AISI12	Si 11-13, Al Bal			

MAGNETIC MATERIAL POWDERS

Product	Grade	Composition (%)	O(%)	A.D.g/cm ³	Particle Size
Magnetic Material Powder	CNPC-FeSi	Si 4-24.8, S2-5.8, 6.2-6.8, Fe Bal	0.45max	3.0-5.0	100mesh, 200mesh, 300mesh D50:10-13µm
	CNPC-FeSiAl	Si 9.0-9.8, Al 5.0-5.8, Fe Bal			
	CNPC-FeSiCr	Cr 3.4-4.0, 6.2-6.8, Cr 4.2-4.8, Fe Bal			
	CNPC-FeNi	Ni 49-51, Fe Bal			

TIN POWDERS

Product	Grade	Composition (%)	O(%)	A.D.g/cm ³	Particle Size				
					+100(150µm)	+140(106µm)	+200(75µm)	+325(45µm)	+325(45µm)
Tin Powder	CNPC-Sn100	Sn99.9min	0.2max	3.0-3.8	≤5	Bal.			≤10
	CNPC-Sn200				-	≤1	≤5	≤30	Bal.
	CNPC-Sn300				-	-	≤1	≤10	Bal.
	CNPC-Sn400				-	-	-	-	≥95
	CNPC-Sn10-15				D50:10-15µm				

OTHER POWDERS

Product	Grade	Composition (%)	O(%)	A.D.g/cm ³	Particle Size	
Lead Powder	CNPC-Pb	Pb99.8min	0.3max	4.5-5.5	100mesh, 200mesh, 300mesh	
Chromium Powder	CNPC-Cr	Cr99min		3.0-4.0		
Cobalt Powder	CNPC-Co	Co99.9min	0.5max	1.5-2.5		
Tungsten Powder	CNPC-W	W99.9min	0.3max	5.0-7.0		fss 1-3µm, 3-5µm, 5-8µm, 8-15µm
Titanium Powder	CNPC-Ti	Ti99min	0.6max	2.5-3.5		
Manganese Powder	CNPC-Mn	Mn99.8min	0.3max	3.0-4.0	100mesh, 200mesh, 300mesh	
Bismuth Powder	CNPC-Bi	Bi99.9min		2.5-3.5		
Zirconium Powder	CNPC-Zr	Zr99.4min		2.5-3.5		
Vanadium Powder	CNPC-V	V99.9min		2.8-3.8		

METAL POWDER APPLICATIONS

We provide the highest quality powders to meet or exceed different requirements from our customers.



Powder Metallurgy



Electronic Paste



Additive Manufacturing



Electrode Materials



Metal Coating



Friction Materials



Magnetic Materials



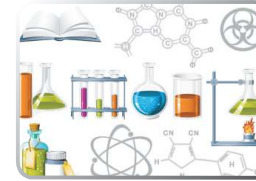
Bearing



Refractory Material



Carbon Brush



Catalysis



Brake Pad



Diamond Tools



Sintered Component



Welding Rods



Metal Injection Molding