



METAL POWDER



METAL POWDER
金属粉末

Specialized in Metal Powders in China

Contact Information
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Meet CNPC POWDER High Quality Metal Powder

Technical Innovation on Powder Material Solution

Shanghai CNPC Enterprise Group Co.,Ltd founded in 2000, is a high-tech enterprise group, has more than 10 subordinate enterprises. CNPC POWDER is an independent brand under Shanghai CNPC enterprise group ,specializing in powder materials production and sales.

上海中油企业集团有限公司成立于2000年，是一家高新技术企业集团，拥有十几家下属企业。中油粉体（CNPC POWDER）是隶属于上海中油企业集团的品牌，专门从事粉体材料生产，销售。

It includes:

- FengCheng Powder Material Factory;
- ChuZhou Ergang Metal products Co.,Ltd;
- Shanghai Guanjin Powder Material Co.,Ltd;
- Shanghai Zhongyou Qifa Powder Material Co.,Ltd.

旗下包括:

- 凤城粉体材料厂
- 滁洲二钢金属制品有限公司
- 上海关金粉体材料有限公司
- 上海中油企发粉体材料有限公司



CNPC POWDER SPECIALIZED IN POWDER MATERIALS

中油粉体-专注于金属粉末

A product portfolio of high and consistent quality powders, managed by our global sales network, offering our customers personal contact, direct support and fast response.

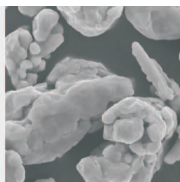
我们有高质量的、稳定的产品，国际化的销售网络，提供给客户快速，完善的服务。

MANUFACTURING PROCESS

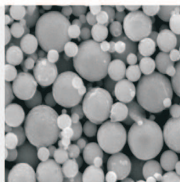
CNPC POWDER tries to provide best products with advanced technology and skilled manufacturing process. We use different production technology to produce powders.

中油粉体-采用不同的工艺流程生产各种粉末，致力于用最先进的技术提供高品质的产品。

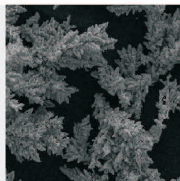
Atomizing Process (Water)



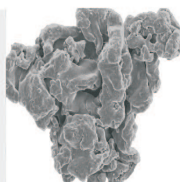
Atomizing Process (Gas)



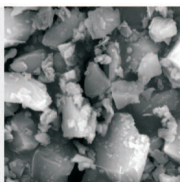
Electrolytic Process



Reduced Process



Pulverizing Method



Available Characterization

参考特性

Chemical Composition

化学成分

Oxide Content

含氧量

The Particle Size Distribution (Sieving & Laser Diffraction)

粒径分布 (筛分和激光衍射)

Particle Shape

颗粒形状

Flow Speed

流动性

Apparent Density

表观密度



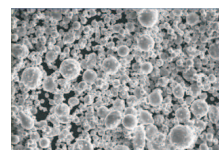
CNPC POWDER Metal Powder Products

Produced in many different grades for varieties of applications.
适用于各行各业的不同规格、不同种类金属粉末材料。

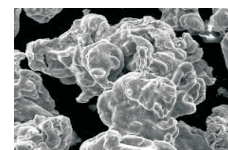
Following are some of the most widely used powders, classified by purity, production method, particle size and density.
下面是根据纯度、加工工艺、颗粒及密度分类的一些被广泛使用的产品。

IRON & IRON ALLOY POWDERS 铁粉和铁合金粉

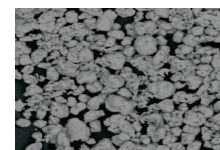
| Product | Grade | Composition (%) | | | | | | | | Physical Properties | | | Particle Size(%) | | |
|---------------------------------------|-----------------------|--------------------------|------------------------------------|------|------|------|---------|---------|---------|-----------------------|-------------------------|--------------|---------------------------|------------|------------|
| | | 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 还原铁粉 | CNPC-FE80 | 99 | 0.01 | 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 | | 0.01 | 0.01 | 0.3 | 0.35 | 0.01 | 0.1 | 0.05 | | ≥6.8 | ≤30 | 3 | ≤45 | 85-95 |
| | CNPC-FE200 | | 0.02 | 0.01 | 0.35 | 0.35 | 0.02 | 0.1 | 0.1 | | ≥6.8 | ≤35 | - | ≤8 | ≤55 |
| | CNPC-FE300 | 98.5 | 0.02 | 0.01 | 0.4 | 0.35 | 0.02 | 0.1 | 0.1 | 2.5-2.8 | ≥6.8 | ≤38 | - | - | ≤8 |
| | CNPC-FE400 | | 0.02 | 0.01 | 0.4 | 0.35 | 0.02 | 0.1 | 0.1 | | ≥6.8 | ≤40 | - | - | ≤2 |
| | CNPC-HFE985 | 98.5 | 0.03 | 0.02 | 0.4 | 0.3 | 0.03 | 0.35 | 0.12 | 2.3-2.6 | ≥6.6 | - | - | - | - |
| CNPC-HFE98 | 98 | 0.05 | 0.02 | 0.5 | 0.3 | 0.04 | 0.4 | 0.15 | 2.3-2.6 | ≥6.5 | ≤34 | 5 | ≤45 | 70-95 | |
| CNPC-HFE97 | 97 | 0.1 | 0.04 | 0.8 | 0.4 | 0.06 | 0.7 | 0.3 | 2.3-2.6 | ≥6.2 | - | - | - | - | |
| Atomized Iron Powder 雾化铁粉 | CNPC-AFE100 | 99.5 | 0.01 | 0.01 | 0.15 | 0.1 | 0.01 | 0.08 | 0.03 | 2.9-3.1 | ≥7.1 | ≤25 | 4 | ≤45 | 65-85 |
| | CNPC-AFE200 | | 0.01 | 0.02 | 0.25 | 0.2 | 0.02 | 0.2 | 0.05 | | - | - | - | ≤8 | - |
| | CNPC-AFE300 | 0.01 | 0.02 | 0.3 | 0.2 | 0.02 | 0.2 | 0.05 | 2.9-3.1 | - | - | - | ≤8 | - | |
| | CNPC-FE40.30 | 99 | 0.01 | 0.01 | 0.2 | - | 0.02 | 0.1 | 0.05 | 2.9-3.2 | - | - | ≤90 | - | - |
| CNPC-FE40.37 | 0.01 | | 0.01 | 0.2 | - | 0.02 | 0.1 | 0.05 | 3.6-3.8 | - | - | - | - | - | |
| Ultrafine Iron Powder 超细铁粉 | CNPC-UFE100 | 99 | 0.03 | 0.01 | 0.8 | - | - | - | - | 1-1.5 | - | - | - | - | D50: 2-4μm |
| | CNPC-UFE200 | | 0.03 | 0.01 | 0.7 | - | - | - | - | 1-1.8 | - | - | - | - | D50: 4-5μm |
| | CNPC-UFE300 | 0.03 | 0.01 | 0.5 | - | - | - | - | 1.2-1.8 | - | - | - | - | D50: 5-7μm | |
| | CNPC-UFE400 | 0.03 | 0.01 | 0.7 | - | - | - | - | 1.9-2.5 | - | - | - | - | D50: 7-9μm | |
| | CNPC-UFE500 | 0.03 | 0.01 | 0.7 | - | - | - | - | 1.9-2.5 | - | - | - | - | D50: 7-9μm | |
| Iron Alloy Powder 铁合金粉 | 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 | | Cu 1.3-1.7, Ni 3.6-4.4, Mo 0.4-0.6 | | | | | | | ≥7.1 | ≤25 | 3 | ≤45 | 85-95 | |
| | CNPC-FeCu30 | Fe 70, Cu 30 | | | | | | 3.2-3.8 | - | - | - | ≤8 | 45-60 | | |
| | CNPC-FeCu40 | Fe 80, Cu 20 | | | | | | | - | - | - | ≤8 | 45-60 | | |
| | CNPC-FeCuNiSn | Fe 85, Cu 10, Ni 3, Sn 2 | | | | | | 2.4-2.7 | - | - | - | ≤8 | 45-60 | | |
| | CNPC-FeCuCo | Bal. | Cu 10-60, Co 4-25 | | | | | | - | - | - | ≤8 | 45-60 | | |
| CNPC-FeCo | Fe 82 Co18; Fe50 Co50 | | | | | | 2.4-2.7 | - | - | - | - | - | D50: 10-15μm; D50 15-20μm | | |
| Ultrafine Iron Alloy Powder 超细铁合金粉 | CNPC-FeCu | Fe 90, Cu 10 | | | | | | 1.2-1.4 | - | - | - | - | - | - | |
| | CNPC-FeCuNiSn | Fe 85, Cu 10, Ni 3, Sn 2 | | | | | | 1.2-1.3 | - | - | - | - | - | D50: 4-5μm | |
| | CNPC-FeCuCo | Fe 79, Cu 18, Co 3 | | | | | | 1.1-1.3 | - | - | - | - | - | - | |
| | CNPC-FeCuNi | Fe 87, Cu 10, Ni 3 | | | | | | 0.8-1.5 | - | - | - | - | - | D50: 3-5μm | |
| | CNPC-FeCuSn | Fe 88, Cu 10, Sn 2 | | | | | | 1-1.5 | - | - | - | - | - | - | |
| | CNPC-FeCuSnCo | Fe 77, Cu 18, Sn 2, Co 3 | | | | | | 1.2-1.5 | - | - | - | - | - | D50: 4-5μm | |



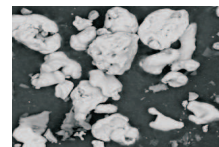
Atomized Iron 雾化铁粉



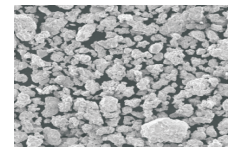
Reduced Iron 还原铁粉



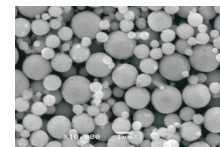
Ultrafine Iron 超细铁粉



Iron Alloy Powder 铁合金粉



Water Atomized Copper 水雾化铜粉



Gas Atomized Copper 气雾化铜粉

COPPER & COPPER ALLOY POWDERS 铜粉和铜合金粉

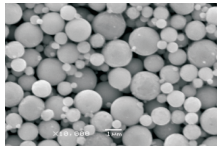
| Product | Grade | Composition (%) | O(%) | A.D.g/cm ³ | Particle Size | | | | |
|------------------------------------|------------------|-------------------------------|--------|-----------------------|---------------------------|----------------|------------|------------|------------|
| | | | | | +100(150μm) | +140(106μm) | +200(75μm) | +325(45μm) | -325(45μm) |
| Atomized Copper Powder 雾化铜粉 | CNPC-WCu100 | Cu99.7min | 0.3max | 2.5-3.5; 4.8-5.2 | ≤5 | | Bal. | | ≤10 |
| | CNPC-WCu200 | | | | - | ≤1 | ≤5 | ≤30 | Bal. |
| | CNPC-WCu300 | | | | - | - | ≤1 | ≤10 | Bal. |
| | CNPC-WCu400 | | | | - | - | - | - | ≥95 |
| Electrolytic Copper Powder 电解铜粉 | CNPC-Cu100 | Cu99.7min | 0.3max | 1.5-2.0 | 5 | | Bal. | | ≤10 |
| | CNPC-Cu200 | | | | - | 1 | ≤5 | ≤30 | Bal. |
| | CNPC-Cu300 | | | | - | - | ≤1 | ≤10 | Bal. |
| CNPC-Cu400 | - | - | - | - | ≥95 | | | | |
| Copper Alloy Powder 铜合金粉 | 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 | | | | | | | | |
| Ultrafine Copper Powder 超细铜粉 | CNPC-FCu100 | Cu99min | 0.3max | 2.0-2.8 | 0.5max | D50: 8-10μm | | | |
| | CNPC-FCu200 | | | | 0.6max | D50: 1-3μm | | | |
| | CNPC-FCu300 | | | | 0.7max | D50: 0.5-1μm | | | |
| | CNPC-FCu400 | | | | 0.8max | D50: 0.3-0.5μm | | | |
| Copper Coated Iron Powder 铜包铁粉 | CNPC-FeCopper | Cu10-30, Fe:Bal. | 0.3max | 2.0-2.5 | 100mesh, 200mesh, 300mesh | | | | |
| | CNPC-FeBronze | Cu9-22, Sn1-3, Zn1-3, Fe:Bal. | | | | | | | |
| | CNPC-FEBrass | Sn10-15, Zn3-8, Fe:Bal. | | | | | | | |

TIN POWDERS 锡粉

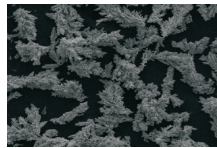
| Product | Grade | Composition (%) | O(%) | A.D.g/cm ³ | Particle Size | | | | |
|------------------|--------------|-----------------|--------|-----------------------|---------------|-------------|------------|------------|------------|
| | | | | | +100(150μm) | +140(106μm) | +200(75μm) | +325(45μm) | -325(45μm) |
| Tin Powder 锡粉 | 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 | | | | - | - | - | - | - |

LEAD POWDERS 铅粉

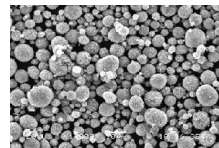
| Product | Grade | Composition (%) | O(%) | A.D.g/cm ³ | Particle Size | | | | |
|-------------------|------------|-----------------|--------|-----------------------|---------------|-------------|------------|------------|------------|
| | | | | | +100(150μm) | +140(106μm) | +200(75μm) | +325(45μm) | -325(45μm) |
| Lead Powder 铅粉 | CNPC-Pb200 | Pb99.8min | 0.3max | 4.5-6.0 | - | ≤1 | ≤5 | ≤30 | Bal. |
| | CNPC-Pb300 | | | | - | - | ≤1 | ≤10 | Bal. |



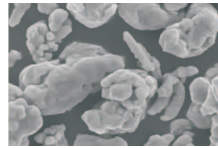
Ultrafine Copper 超细铜粉



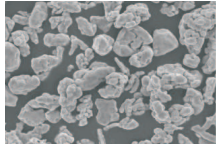
Electrolytic Copper 电解铜



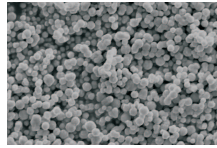
Copper Alloy Powder 铜合金粉



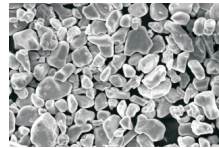
Brass Powder 黄铜粉



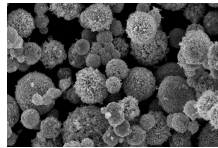
青铜粉 Bronze Powder



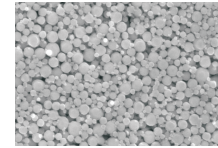
Tin Powder 锡粉



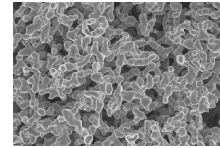
Lead Powder 铅粉



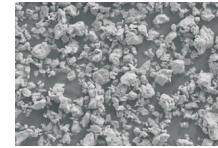
Reduced Nickel 还原镍粉



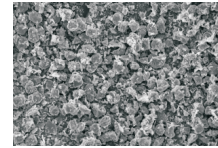
Ultrafine Nickel 超细镍粉



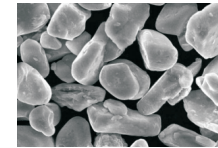
Cobalt Powder 钴粉



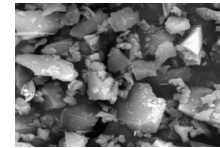
Tungsten Powder 钨粉



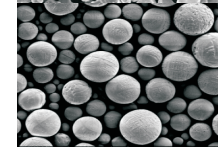
Chromium Powder 铬粉



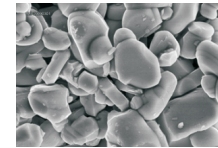
Stainless Steels 不锈钢



Silicon Powder 硅粉



Aluminum Powder 铝粉



Zinc Powder 锌粉

NICKEL POWDERS 镍粉

| Product | Grade | Composition (%) | O(%) | A.D.g/cm ³ | Particle Size | | | | |
|--------------------------|-------------|-----------------|--------|-----------------------|----------------|-------------|------------|------------|------------|
| | | | | | +100(150μm) | +140(106μm) | +200(75μm) | +325(45μm) | -325(45μm) |
| Nickel Powder 镍粉 | CNPC-Ni100 | Ni99.8min | 0.3max | 1.5-2.0 | 5 | Bal. | | | ≤10 |
| | CNPC-Ni200 | | | | - | 1 | ≤5 | ≤30 | Bal. |
| | CNPC-Ni300 | | | | - | - | ≤1 | ≤10 | Bal. |
| | CNPC-HNi100 | | | | D50: 5-10μm | | | | |
| Ultrafine Nickel 超细镍粉 | CNPC-UNi100 | Ni99min | 0.5max | 0.5-1.0 | D50: 1-3μm | | | | |
| | CNPC-UNi200 | | 0.6max | | D50: 0.5-1μm | | | | |
| | CNPC-UNi300 | | 0.7max | | D50: 0.3-0.5μm | | | | |
| | CNPC-UNi400 | | 0.8max | | D50: 0.1-0.3μm | | | | |

Co & W & Cr POWDERS 钴粉、钨粉和铬粉

| Product | Grade | Composition (%) | O(%) | A.D.g/cm ³ | Particle Size | | | | |
|-----------------------|-------------|-----------------|--------|-----------------------|---------------------------|--------------|------------|------------|------------|
| | | | | | +100(150μm) | +140(106μm) | +200(75μm) | +325(45μm) | -325(45μm) |
| Cobalt Powder 钴粉 | CNPC-Co100 | Co99.9min | 0.5max | 0 | Fsss: 1.5-2.0μm; D50<15μm | | | | |
| | CNPC-Co200 | | | | Fsss: 1.5-2.0μm; D50<10μm | | | | |
| Tungsten Powder 钨粉 | CNPC-W01 | W99.95min | 0.3max | - | 3.3-4.2 | Fsss: 1-3μm | | | |
| | CNPC-W02 | | | | 3.8-4.8 | Fsss: 3-5μm | | | |
| | CNPC-W03 | | | | 4.2-5.2 | Fsss: 5-8μm | | | |
| | CNPC-W04 | | | | 4.5-6 | Fsss: 8-15μm | | | |
| Chromium Powder 铬粉 | CNPC-Cr100 | Cr99min | 0.6max | - | 5 | Bal. | | | ≤10 |
| | CNPC-Cr200 | | | | - | 1 | ≤5 | ≤30 | Bal. |
| | CNPC-Cr300 | | | | - | - | ≤1 | ≤10 | Bal. |
| | CNPC-ECr100 | | | | 5 | Bal. | | | ≤10 |
| Chromium Powder 铬粉 | CNPC-ECr200 | Cr99.95min | 0.3max | - | - | 1 | ≤5 | ≤30 | Bal. |
| | CNPC-ECr300 | | | | - | - | ≤1 | ≤10 | Bal. |

STAINLESS STEEL POWDERS 不锈钢粉

| Product | Grade | Composition (%) | O (%) | A.D.g/cm ³ | Particle Size |
|-----------------------------------|-------------|---------------------------------|---------|-----------------------|---|
| Stainless Steel Powder 不锈钢粉 | CNPC-SS304 | Cr18-20, Ni8-12, C 0.08 | 0.45max | 3.5-5.0 | 100mesh, 200mesh, 300mesh, 400mesh; D50: 9-12μm |
| | CNPC-SS304L | Cr18-20, Ni8-12, C 0.03 | | | |
| | CNPC-SS316 | Cr16-18, Ni10-14, Mo2-3, C 0.08 | | | |
| | CNPC-SS316L | Cr16-18, Ni10-14, Mo2-3, C 0.03 | | | |
| | CNPC-SS410L | Cr11.5-13.5, C 0.03 | | | |
| | CNPC-SS430L | Cr16-18, C 0.05 | | | |

SILICON POWDERS 硅粉

| Product | Grade | Composition (%) | O (%) | A.D.g/cm ³ | Particle Size |
|----------------------|-------------|-----------------|--------|-----------------------|---------------|
| Silicon Powder 硅粉 | CNPC-2NSi20 | Si99min | 0.5max | 0 | D50: 18-25μm |
| | CNPC-2NSi10 | | | | D50: 8-12μm |
| | CNPC-2NSi5 | | | | D50: 4-6μm |
| | CNPC-2NSi2 | | | | D50: 1-3μm |
| | CNPC-3NSi40 | Si99.9min | | | D50: 38-45μm |
| | CNPC-3NSi20 | | | | D50: 18-25μm |
| | CNPC-3NSi10 | | | | D50: 8-12μm |
| | CNPC-3NSi5 | | | | D50: 4-6μm |
| | CNPC-3NSi2 | Si99.99min | | | D50: 1-3μm |
| | CNPC-4NSi40 | | | | D50: 38-45μm |
| | CNPC-4NSi20 | | | | D50: 18-25μm |
| | CNPC-4NSi10 | | | | D50: 8-12μm |
| | CNPC-4NSi5 | D50: 4-6μm | | | |

Al & Mg & Zn POWDERS 铝粉、镁粉和锌粉

| Product | Grade | Composition (%) | O (%) | A.D.g/cm ³ | Particle Size |
|------------------------|------------|-----------------|--------|-----------------------|---------------|
| Aluminum Powder 铝粉 | CNPC-Al100 | Al99.8min | 0.3max | 0.8-1.2 | D50: 30-50μm |
| | CNPC-Al15 | | | | D50: 10-15μm |
| | CNPC-Al2 | | | | D50: 4-5μm |
| Magnesium Powder 镁粉 | CNPC-Mg20 | Mg99.9min | | 0.6-1 | 20-80mesh |
| | CNPC-Mg100 | | | 100 mesh | |
| | CNPC-Mg200 | | | 200 mesh | |
| Zinc Powder 锌粉 | CNPC-Zn200 | Zn99.5min | | - | 200 mesh |
| | CNPC-Zn300 | | | 300 mesh | |
| | CNPC-Zn500 | | | 500 mesh | |

OTHER POWDERS 其他粉

| Product | Grade | Composition (%) | O (%) | A.D.g/cm ³ | Particle Size |
|------------------------|---------|-----------------|--------|-----------------------|---------------------------|
| Titanium powder 钛粉 | CNPC-Ti | Ti99min | 0.6max | - | 100mesh, 200mesh, 300mesh |
| Manganese powder 锰粉 | CNPC-Mn | Mn99.8min | 0.3max | | |
| Bismuth powder 铋粉 | CNPC-Bi | Bi99.9min | | | |
| Zirconium Powder 锆粉 | CNPC-Zr | Zr99.4min | | | |
| Vanadium Powder 钒粉 | CNPC-V | V99.9min | | | |
| Selenium Powder 硒粉 | CNPC-Se | Se99.9min | | | |

METAL POWDER APPLICATIONS

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

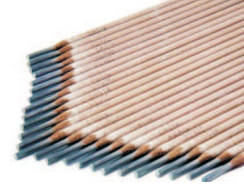
我们提供最高品质的粉末以满足或者超越客户的不同需求。



Powder Metallurgy 粉末冶金



Brake Pad 刹车片



Welding Rods 电焊条



Metal Coating 金属涂层



Sintered Component 烧结件



Magnetic Materials 磁性材料



Friction Materials 摩擦材料



Carbon Brush 碳刷



Bearing 轴承



Refractory Material 耐火材料



Catalysis 催化剂



Electronic Paste 电子浆料



Diamond Tools 金刚石工具



Hard Alloy 硬质合金



Silicon Nitride 氮化硅



Metal Injection Molding 注射成型