

# Iron Powder

# CNPC-UFE

CNPC-UFE is ultrafine iron powder main used in diamond tools, chemical industry, absorbing materials, lithium iron phosphate batteries, electric conductive slurry

## FEATURES AND BENEFITS

|                   |   |   |
|-------------------|---|---|
| High Consistency  | A stable ore material and statistically controlled manufacturing process assure lot-to-lot consistency, homogeneous and dense | <ul style="list-style-type: none"> <li>◆ Improves part consistency</li> <li>◆ Increases productivity</li> <li>◆ Reduces processing cost</li> </ul>                                  |
| High Purity       | CNPC-UFE is produced by chemical method with high purity assures a consistently pure product                                  | <ul style="list-style-type: none"> <li>◆ Assures consistency of premix chemistry.</li> <li>◆ Improves compressibility</li> <li>◆ Extends tool life</li> </ul>                       |
| Temperature range | Sintering hardness of HRB85-100, Flexural strength > 1000Mpa, Effectively promote the diamond protrusion                      | <ul style="list-style-type: none"> <li>◆ Improves thin section morphology</li> <li>◆ Facilitates green part handling</li> </ul>   |
| Salient features  | With good mechanical properties, suitable for rock cutting, grinding tools, cement saw blade and ceramic cutting              | <ul style="list-style-type: none"> <li>◆ Allows close-to-die design</li> <li>◆ Reduces sintered dimensional variation Improves dimensional Control of infiltrated parts.</li> </ul> |

## PHYSICAL AND CHEMICAL PROPERTIES

|                  |              |              |              |              |
|------------------|--------------|--------------|--------------|--------------|
| Fe(%)            | 99           |              |              |              |
| C(%)             | 0.03         |              |              |              |
| N(%)             | 0.01         |              |              |              |
| O(%)             | 0.3-1        |              |              |              |
| Grade            | CNPC-UFE100  | CNPC-UFE200  | CNPC-UFE300  | CNPC-UFE400  |
| D50              | 2-4um        | 4-5um        | 5-7um        | 7-9um        |
| Apperent density | 0.8-1.5g/cm3 | 1.2-1.8g/cm3 | 1.5-2.2g/cm3 | 2.0-2.5g/cm3 |
| Tap density      | 2.0-3.2g/cm3 | 2.4-3.5g/cm3 | 2.6-3.8g/cm3 | 3.2-4.2g/cm3 |
| Bending strength | 1150-1250Mpa | 1050-1150Mpa | 950-1050Mpa  | 880-980Mpa   |
| Hardness         | 91-95HRB     | 88-92HRB     | 75-85HRB     | 68-72HRB     |

