

# Iron Powder

## CNPC-AFE100

CNPC-AFE100 is a high green strength iron powder specifically manufactured for low to medium density P/M applications, resin casting, and rough magnetic paints

### FEATURES AND BENEFITS

High Consistency	A stable high pure material and statistically controlled manufacturing process assure lot-to-lot consistency	<ul style="list-style-type: none"> <li>◆ Improves part consistency</li> <li>◆ Increases productivity</li> <li>◆ Reduces processing cost</li> </ul>
High Purity	CNPC-AFE100 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> <li>◆ Promotes rapid sintering</li> </ul>
High Green Strength	Surface morphology assures powder compacts of good structural integrity	<ul style="list-style-type: none"> <li>◆ Improves thin section morphology</li> <li>◆ Facilitates green part handling</li> </ul>
Low Growth Characteristic	The high purity and large specific surface area of CNPC-AFE100 allow rapid sintering and high dimensional control.	<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

Green Density	7.1 g/cm <sup>3</sup>	Chemical Analysis: (wt %)	
Apparent Density	2.8 g/cm <sup>3</sup>		
Flow rate	28.00 sec/50g	C 0.01	
Typical Screen Analysis		O 0.15	
U.S. mesh	Microns	Wt %	S 0.006
80	+180	Trace	P 0.008
100	-180 +150	2	Mn 0.13
140	-150 +106	18	Cr 0.005
200	-106 +75	29	Ni 0.005
325	-75 +45	30	Si 0.08
-325	-45	21	Cu 0.005
+: stays over/ is larger than			Mo 0.003
- : Passes trough/ is smaller than			Fe 99.5+

- \* CNPC-AFE100 + graphite + copper + 0.5% ZnSt
- \* Sintered in a rich endothermic atmosphere at 1120°C for 30 minutes.
- \* Sintered Density 7.0g/cm<sup>3</sup>

