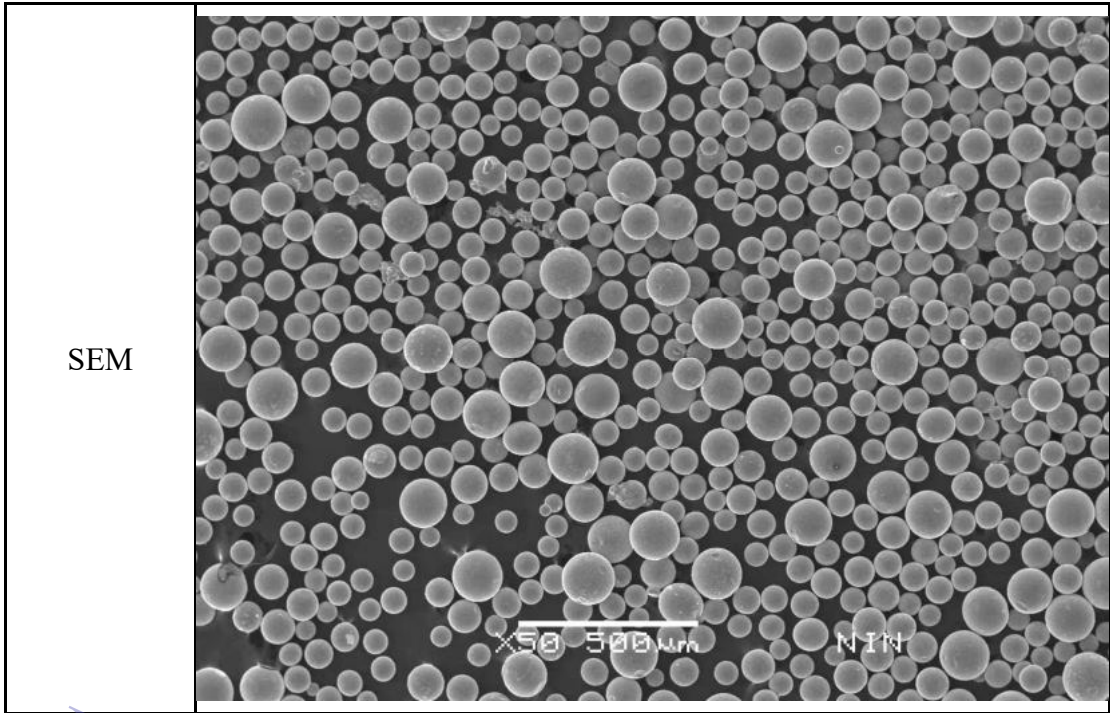


## PRODUCT TEST CERTIFICATE

Product Name	Spherical Inconel 718 Powder	Type	45-150 $\mu$ m		
<b>Chemical Composition</b>					
Element	Standard (wt%)	Test result	Element	Standard (wt%)	Test result
C	$\leq 0.08$	0.038	Ti	0.65-1.15	1.05
Mn	$\leq 0.35$	0.064	Al	0.2-0.8	0.77
Si	$\leq 0.35$	0.088	Co	$\leq 1$	0.31
P	$\leq 0.015$	0.005	B	$\leq 0.006$	<0.002
S	$\leq 0.015$	<0.0005	Cu	$\leq 0.3$	0.11
Cr	17-21	17.41	Pb	$\leq 0.0005$	<0.0003
Ni	50-55	52.63	Bi	$\leq 0.00003$	<0.0003
Mo	2.8-3.3	2.84	Se	$\leq 0.0003$	<0.0003
Nb	4.75-5.5	5.37	Fe	Bal	
<b>Particle Size Distribution</b>					
D10			53.12 $\mu$ m		
D50			81.59 $\mu$ m		
D90			121.2 $\mu$ m		
<b>Density</b>			<b>Hall Flow Rate</b>		
Apparent Density (g/cm <sup>3</sup> )	Tap Density (g/cm <sup>3</sup> )		Value(s/50g)		
5.12	4.77		14.0		



Heeger Materials Inc.