

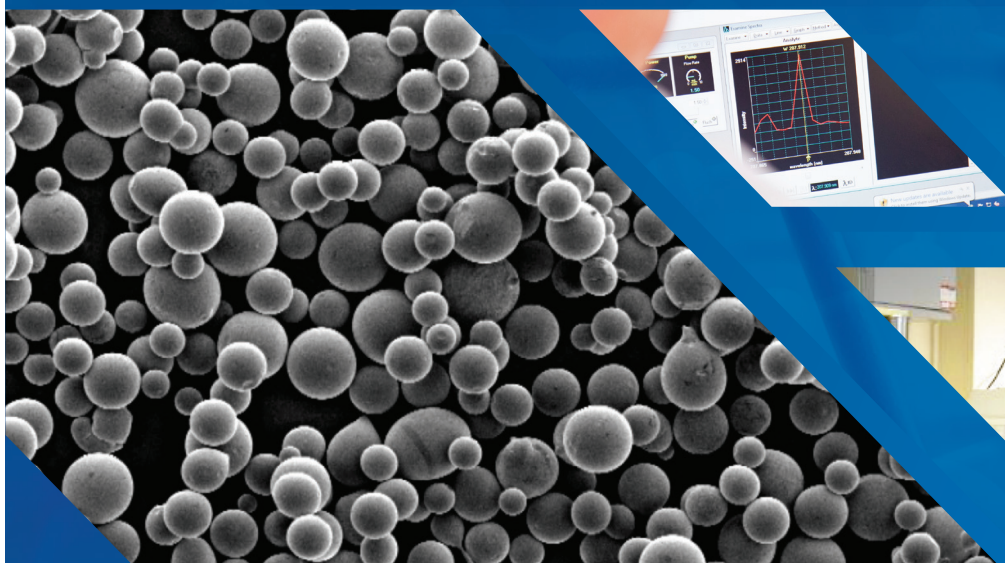
## LSN Diffusion Limited - Metal Powders for Additive Manufacturing

LSN Diffusion's technical, manufacturing and QC teams have over 500 years combined experience in the production and application of inert gas and water atomised powders.

**LSN Diffusion is ideally placed to support Additive Manufacturing with a wide range of cobalt, nickel and iron based alloy powders.**

In addition we offer customized alloys in test quantities to facilitate customers' development projects.

LSN Diffusion is accredited to ISO 9001 and ISO 14001.



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**Additive Manufacturing**  
nickel, cobalt, and iron based alloys



### Iron Based Alloys

LSN reference	Product	Fe	Cr	Ni	Mo	Mn	Si	C	Others
F-304L	304L	Bal	18.5	9		2 max	1 max	0.03 max	Cu 1
F-310L	310L	Bal	25	20		2 max	1.5 max	0.25 max	
F-316L	316L	Bal	17	12	2.5	2 max	0.75 max	0.03 max	
F-15/5 PH	15/5 PH	Bal	14.75	4.75		1 max	1 max	0.07 max	Cu 3.5, Nb & Ta 0.3
F-17/4 PH	17/4 PH	Bal	16	4		1 max		0.07 max	Cu 4.0
F-410	410	Bal	13			1 max	1 max	0.08 max	
F-420	420	Bal	13			1 max	1 max	0.15 max	
F-H13	Tool Steel H13	Bal	5		1.3	0.3	1	0.3	V 1.0
F-M300	Maraging Steel	Bal	0.25 max	18	5	0.1	0.1	0.03	Ti 1, Co 9, Al 0.1
F-4140	Low Alloy Steel 4140	Bal	0.9		0.2	1	0.35 max	0.35	

### Nickel Based Alloys

LSN reference	Product	Ni	Cr	Mo	Nb (& Ta)	C	Mn	Si	Others
N-i625	Inconel 625 <sup>*1</sup>	Bal	21.5	9	3.6	0.1 max	0.5 max	0.5 max	Al 0.4 max, Ti 0.4 max
N-i718	Inconel 718 <sup>*1</sup>	52.5	19	3	5	0.08 max	0.35 max	0.35 max	Ti 1.0, Al 0.5, Fe Bal
N-C22	Hastelloy C-22 <sup>*2</sup>	Bal	21	13.5		0.01 max	0.5 max	0.8 max	W 3, Co 2.5 max, V 0.35 max
N-CX	Hastelloy X <sup>*2</sup>	Bal	22	9		0.1	1	1 max	Co 1.5, W 0.6, Fe 18

<sup>\*1</sup> Registered trademark of Special Metals Corporation    <sup>\*2</sup> Registered trademark of Haynes International Inc.

### Cobalt Based Alloys

LSN reference	Product	Co	Cr	W	Mo	C	Mn	Si	Others
C-21		Bal	27		5.5	0.25	1 max	1 max	
C-06		Bal	29	4.5	1 max	1.2	1 max	1.2	Fe 3 max
C-12		Bal	29	8	1 max	1.5	1 max	1.2	Fe 3 max
C-F75	F-75	Bal	29		5.6	0.03 max	1 max	1 max	

## WE KNOW POWDER

### Laboratory and Testing Capabilities

LSN Diffusion has comprehensive R&D and QC facilities.

#### The fully equipped test laboratory includes:

- **Chemical Analysis by:**  
ICP spectrometry  
Oxygen, nitrogen, carbon and sulphur analysis
- **Particle Size Analysis:**  
By laser  
By mechanical sieve
- **Powder Physical Properties:**  
Digital Microscope x1000  
Hall Flow test  
Apparent density
- **Hardness Testing – Rockwell**



### Packaging available

	Kilograms	Pounds
Bottles	5	11
Kegs	25	55
Drums	250	551

### Particle Size Ranges available

	µm
LA1	45-15
LA2	38-15
LA3	53-10
LA4	90-45

Please ask for other sizes and customized PSDs

LSN Diffusion Limited, located in South Wales, UK, manufactures premium grade powders by gas and water atomization and offers a specialist contract service for powder sizing by sieving and classification and recovery of used powder.

