

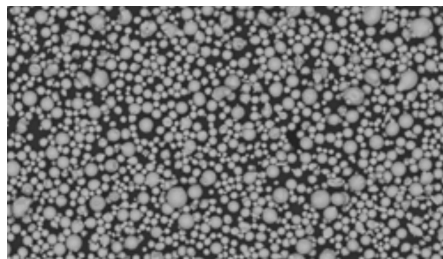
TruForm™ Metal Powders for Additive Manufacturing

TruForm™ 718 Metal Powder

TruForm™ 718 is a precipitation-hardenable nickel-chromium alloy with excellent properties for strength, fatigue, creep, and rupture strength up to 1300°F (704°C). IN718 is a high volume production alloy for high temperature applications such as aircraft engines and gas turbines.

Particle Size Distribution

Powders are available in a wide variety of particle size distributions and can be customized for your applications.



TruForm™ Metal Powders for All Additive Manufacturing Processes Including:

- Direct Metal Deposition (DED)
- Direct Metal Laser Sintering (DMLS)
- Electron Beam Melting (EBM)
- Laser Metal Deposition (LMD)
- Selective Laser Melting (SLM)



Typical Mechanical Properties (contact us for additional property data)

Room Temperature	As Built	As Built Min. ASTM F3055-14	Heat Treat per AMS 5662	HT Min. ASTM F3055-14	
Tensile Strength	(XY)	1080 ± 50 MPa 157 ± 7 ksi	980 MPa 142 ksi	1450 ± 100 MPa 210 ± 15 ksi	1240 MPa 180 ksi
	(Z)	960 ± 50 MPa 139 ± 7 ksi	920 MPa 133 ksi	1380 ± 100 MPa 200 ± 15 ksi	1240 MPa 180 ksi
Yield Strength	(XY)	800 ± 50 MPa 116 ± 7 ksi	635 MPa 92 ksi	1265 ± 100 MPa 184 ± 15 ksi	940 MPa 136 ksi
	(Z)	625 ± 50 MPa 91 ± 7 ksi	600 MPa 87 ksi	1205 ± 100 MPa 175 ± 15 ksi	920 MPa 133 ksi
Elongation	(XY)	31 ± 5%	27%	20 ± 5%	12%
	(Z)	35 ± 5%	27%	20 ± 5%	12%

Element	Typical Composition
Ni	50.00 - 55.00
Cr	17.00 - 21.00
Fe	15.00 - 21.00
Nb+Ta	4.75 - 5.50
Mo	2.80 - 3.30
Ti	0.65 - 1.15
Al	0.20 - 0.80
Co	1.00 Max
Mn	0.35 Max
Si	0.35 Max
Cu	0.30 Max
C	0.08 Max
Ta	0.05 Max
P	0.015 Max
S	0.015 Max
B	0.006 Max



Powder Atomization Capabilities

Praxair is a worldwide resource for fine and spherical, gas-atomized powders and a leader in vacuum induction melt argon gas atomization (VIM-AGA) technology. We operate 5 VIM AGA units and pour more than 3 million lbs of powder each year.

AM Quality Lab

Our quality laboratory is registered as an ISO-9001:2008, Nadcap AS7101, and AS9100 facility. We offer 100 percent lot inspection along with a certificate of analysis that details the variety of quality tests we conduct from our state-of-the-art facility to ensure your printed products meet your performance and surface finish specifications.



Additive Manufacturing Lab

We are printing parts every day with our AM metal powder to ensure that layer by layer, you are getting a premium product that can produce products to your exacting specifications.



A global leader in metal powders for 50 years, aerospace—grade is our benchmark.

With five powder atomizers, a fully-outfitted AM quality lab, an R&D lab complete with a metal 3D printer, and a staff of credentialed experts...

Praxair is the only partner you need to deliver on the promise of metal AM



CONTACT US

Contact our technical sales team for guidance in selecting a material, requesting an alloy not listed here, or for additional details.

praxairsurfacetechologies.com/am

Contact us at: 1-317-240-2650 or praxair_am@praxair.com

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