

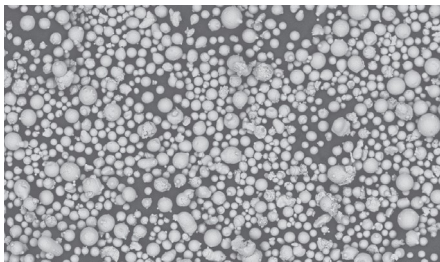
# TruForm™ Metal Powders for Additive Manufacturing

## TruForm™ 625 Metal Powder

TruForm™ 625 is a nickel-chromium alloy with excellent properties for strength, toughness, and corrosion and oxidation resistance up to 1800°F (982°C). IN625 is a high volume production alloy for high temperature applications such as aircraft engines and gas turbines and severe corrosive environments like sea water applications and chemical plants.

### 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	Stress Relieved	Stress Relieved + HIP Solution Heat Treat	Minimum AMS 566J
Tensile Strength (XY)	1080 ± 50 MPa 157 ± 7 ksi	1050 ± 50 MPa 152 ± 7 ksi	875 ± 50 MPa 127 ± 7 ksi	758 MPa 110 ksi
	960 ± 50 MPa 139 ± 7 ksi	950 ± 50 MPa 139 ± 7 ksi	850 ± 50 MPa 122 ± 7 ksi	
Yield Strength (XY)	740 ± 50 MPa 107 ± 7 ksi	740 ± 50 MPa 107 ± 7 ksi	390 ± 50 MPa 57 ± 7 ksi	345 MPa 50 ksi
	600 ± 50 MPa 87 ± 7 ksi	600 ± 50 MPa 87 ± 7 ksi	378 ± 50 MPa 54 ± 7 ksi	
Elongation (XY)	34 ± 5%	35 ± 5%	60 ± 5%	30%
	42 ± 5%	45 ± 5%	60 ± 5%	

Element	Typical Composition
Ni	Bal
Cr	20.00 - 23.00
Mo	3.15 - 4.15
Nb+Ta	4.75 - 5.50
Fe	5.00 Max
Co	1.00 Max
Ti	0.40 Max
Al	0.40 Ma
Si	0.50 Max
Mn	0.50 Max
C	0.10 Max
Cu	0.05 Max
Ta	0.05 Max
P	0.015 Max
S	0.015 Max
B	0.010 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](http://praxairsurfacetechologies.com/am)

Contact us at: 1-317-240-2650 or [praxair\\_am@praxair.com](mailto:praxair_am@praxair.com)

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