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)

<table>
<thead>
<tr>
<th>Room Temperature</th>
<th>As Built</th>
<th>Stress Relieved</th>
<th>Stress Relieved + HIP Solution Heat Treat</th>
<th>Minimum AMS 5666J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength</td>
<td>(XY) 1080 ± 50 MPa 157 ± 7 ksi</td>
<td>1050 ± 50 MPa 152 ± 7 ksi</td>
<td>875 ± 50 MPa 127 ± 7 ksi</td>
<td>758 MPa 110 ksi</td>
</tr>
<tr>
<td></td>
<td>(Z) 960 ± 50 MPa 139 ± 7 ksi</td>
<td>950 ± 50 MPa 139 ± 7 ksi</td>
<td>850 ± 50 MPa 122 ± 7 ksi</td>
<td></td>
</tr>
<tr>
<td>Yield Strength</td>
<td>(XY) 740 ± 50 MPa 107 ± 7 ksi</td>
<td>740 ± 50 MPa 107 ± 7 ksi</td>
<td>390 ± 50 MPa 57 ± 7 ksi</td>
<td>345 MPa 50 ksi</td>
</tr>
<tr>
<td></td>
<td>(Z) 600 ± 50 MPa 87 ± 7 ksi</td>
<td>600 ± 50 MPa 87 ± 7 ksi</td>
<td>378 ± 50 MPa 54 ± 7 ksi</td>
<td></td>
</tr>
<tr>
<td>Elongation</td>
<td>(XY) 34 ± 5%</td>
<td>35 ± 5%</td>
<td>60 ± 5%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>(Z) 42 ± 5%</td>
<td>45 ± 5%</td>
<td>60 ± 5%</td>
<td></td>
</tr>
</tbody>
</table>

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
TruForm™ Metal Powders
For Additive Manufacturing

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