

## Datasheet

Austenitic stainless steel

# Osprey® 316Ti

Osprey® 316Ti is a titanium-stabilized austenitic chromium-nickel stainless steel alloyed with molybdenum. It has good corrosion resistance, especially at high temperatures.

UNS

S31635

ASTM, AISI

316Ti

EN Name

X 6 CrNiMoTi 17 12 2

EN Number

1.4571

BS

316S61

Powder designed for

- Additive Manufacturing (AM)



## Product description

Osprey® 316Ti is a titanium-stabilized austenitic chromium-nickel stainless steel alloyed with molybdenum. The alloy has good corrosion resistance, especially at high temperatures.

This metal powder is manufactured by Inert Gas Atomization (IGA), producing a powder with a spherical morphology which provides good flow characteristics and high packing density. In addition, the powder has a low oxygen content and low impurity levels, resulting in a metallurgically clean product with enhanced mechanical performance.

## Chemical composition (nominal), %

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Fe	Bal.
C	0.08
Cr	16.0-18.0
Ni	10.0-14.0
Mo	2.0-3.0
Si	1.0
Mn	2.0
Other	Ti 0.7,N 0.25

## Powder characteristics and morphology

### **Powder for Additive Manufacturing**

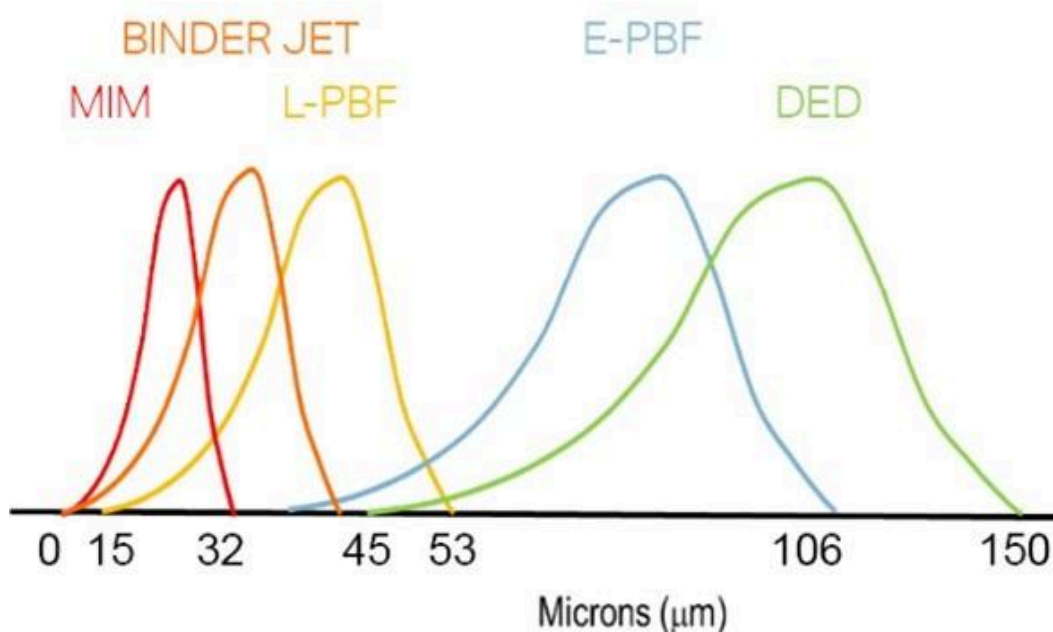
Osprey® metal powder for Additive Manufacturing is characterized by a spherical morphology and high packing density, which confer good flow properties. For powder bed processes these are essential when applying fresh powder layers to the bed to ensure uniform and consistent part build.

For blown powder processes, such as Direct Energy Deposition (DED), good flow ensures uniform build rates. Tight control of the particle size distribution also helps ensure good flowability. Low oxygen powders result in clean microstructures and low inclusion levels in the finished parts.

## Particle size distribution

### Powder for Additive Manufacturing

Osprey® metal powder for Additive Manufacturing is available in a wide range of particle size distributions that are tailored to the individual Additive Manufacturing systems. They can also be tailored to the particular requirements of the end application, both in terms of mechanical performance and surface finish.



*Typical particle size distributions for Additive Manufacturing.*

Binder jetting	$\leq 16, \leq 22, \leq 32, \leq 38, \leq 45$
Laser - Powder Bed Fusion (L-PBF)	15 to 53 and 10 to 45
Electron beam - Powder Bed Fusion (E-PBF)	45 to 106
Direct Energy Deposition (DED)	53 to 150

Tailor-made particle size distributions are available on request. Contact us to discuss your specific requirements.

## Testing

All Osprey® metal powders are supplied with a certificate of analysis containing information on the chemical composition and particle size distribution. Information on other powder characteristics is available upon request.

## Packaging

A wide range of packaging options are available, from 1 kg (2.2 lb) to 200 kg (440 lb)\*.

Contact our team who can support you with selecting the right packaging for your product and application.

\*Some packaging options may not be available for all products due to international shipping regulations.