

# INDO-SPHERE SS-420

SS-420 is high carbon stainless steel combined with good corrosion resistance, ductility, and machinability properties. Its chemical composition corresponds to UNS S42000 for use in additive manufacturing processes. Vacuum Induction Melting - Inert Gas Atomization process is used at INDO-MIM for manufacturing of powder. Our unique ASB technique improves powder sphericity, which enhances flowability in achieving consistent density and uniform build rates.

## Particle Size Distribution

Light scattering ( ASTM B822 / ISO 13320-1)				
Application	Size Range	D10%	D50%	D90%
MIM	<22µm	5.0 max	12.0 max	22.0 max
BJ	<25µm	5.5 max	13.5 max	25.0 max
LPBF	15 – 53µm	24.0 max	36.0 max	54.0 max

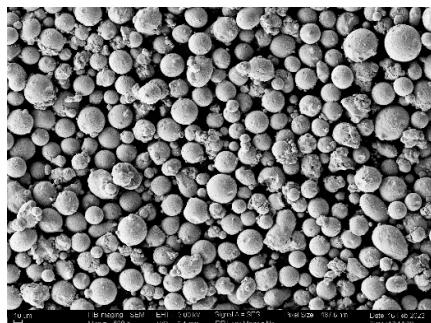
## Chemical Composition (weight %)

Element	Range (%)
Carbon	0.15 min
Silicon	1.00 max
Manganese	1.00 max
Phosphorous	0.040 max
Sulphur	0.030 max
Chromium	12.00 – 14.00
Nickel	0.75 max
Molybdenum	0.50 max
Iron	Balance

## Physical Properties

Property	g/cc	Test Method
Tap Density	4.60 min	ASTM B527
True Density	7.65 min	ASTM B923

## Morphology



\*Applicable only for LPBF

**Customization** on chemical composition & particle size can be made.

**Packing** with 10 / 50 / 100 kg containers & custom packing is possible.