

**INDO-MIM PVT LTD.**

#45(P), KIADB Industrial Area, Doddaballapur, Bengaluru - 561203

Phone: +91-080-22048600/636 | FAX: +91-080-27630532

Email: [infopowders@indo-mim.com](mailto:infopowders@indo-mim.com) or [infohq@indo-mim.com](mailto:infohq@indo-mim.com) | Website: [www.indo-mim.com](http://www.indo-mim.com)

# INDO-SPHERE 4140

4140 is low alloy steel known for its toughness, high fatigue, and torsional strength. Its chemical composition corresponds to UNS G41400 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%
<b>MIM</b>	<22µm	5.0 max	12.0 max	22.0 max
<b>BJ</b>	<25µm	5.5 max	13.5 max	25.0 max
<b>LPBF</b>	15 – 53µm	24.0 max	36.0 max	54.0 max

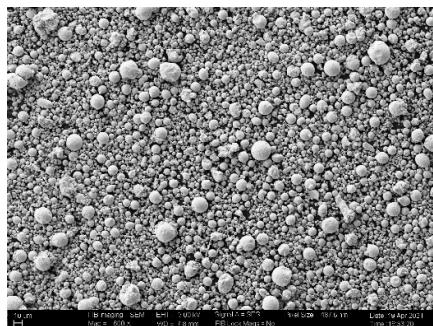
## Chemical Composition (weight %)

Element	Range (%)
Carbon	0.38 – 0.43
Silicon	0.15 – 0.30
Manganese	0.75 – 1.00
Phosphorous	0.035 max
Sulphur	0.040 max
Chromium	0.8 – 1.10
Molybdenum	0.15 – 0.25
Others	0.30 max
Iron	Balance

## Physical Properties

Property	g/cc	Test Method
<b>Tap Density</b>	4.50 min	ASTM B527
<b>True Density</b>	7.60 min	ASTM B923

## Morphology



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

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