

INDO-SPHERE SS 17-4PH

SS 17-4PH is martensitic precipitation hardening stainless steel that provides an outstanding combination of mechanical properties and corrosion resistance. Its chemical composition corresponds to UNS S17400/ASTM F899 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.

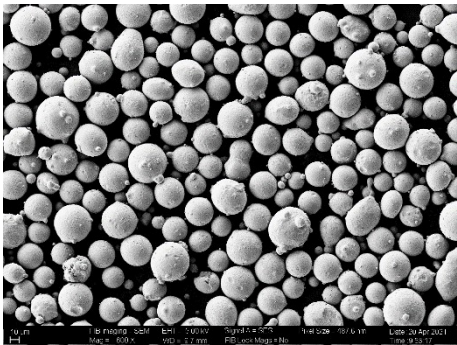
Particle Size Distribution

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
	15 – 45µm	24.0 max	36.0 max	48.0 max

Physical Properties

Property	g/cc	Test Method
Tap Density	4.65 min	ASTM B527
True Density	7.70 min	ASTM B923

*Applicable only for LPBF



Chemical Composition (weight %)

Element	Limits
Carbon	0.07 max
Silicon	1.00 max
Manganese	1.00 max
Phosphorous	0.040 max
Sulfur	0.030 max
Molybdenum	0.30 max
Chromium	15.0 – 17.50
Copper	3.0 – 5.00
Nickel	3.00 – 5.00
Niobium	0.15 – 0.45
Oxygen*	0.06 max
Nitrogen*	0.12 max
Iron	Balance

Morphology

Customization on chemical composition & particle size can be made.

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