

Alloy 713C

Alloy 713C is 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%
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

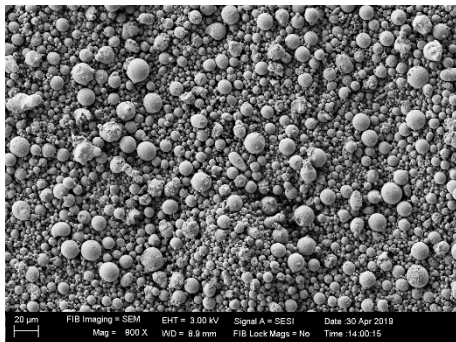
Chemical Composition (weight %)

Element	Range (%)
Carbon	0.08 max
Silicon	0.50 max
Manganese	1.00 max
Phosphorous	0.015 max
Sulphur	0.015 max
Chromium	14.0 – 17.0
Molybdenum	1.00 max
Niobium	0.70 – 1.20
Titanium	2.25 – 2.75
Aluminium	0.40 – 1.00
Iron	5.00 – 9.00
Copper	0.50 max
Nickel	70.00 min

Physical Properties

Property	g/cc	Test Method
Tap Density	4.50 min	ASTM B527
True Density	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.