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# INDO-SPHERE HNS-25

HNS 25 Cobalt super alloy has a resistant to oxidation and carburization coupled with excellent high temperature strength. Its chemical composition corresponds to UNS R30605 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 |

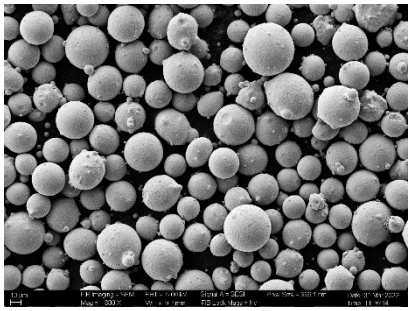
## Chemical Composition (weight %)

| Element | Range (%) |
|---|---|
| Carbon | 0.05 max |
| Silicon | 1.00 max |
| Manganese | 1.00 – 2.00 |
| Phosphorous | 0.03 max |
| Sulphur | 0.03 max |
| Chromium | 19.0 – 21.0 |
| Nickel | 9.00 – 11.00 |
| Tungsten | 14.00 – 16.00 |
| Iron | 1.00 Max |
| Others | 0.50 Max |
| Cobalt | Balance |

## Physical Properties

| Property | g/cc | Test Method |
|---|---|---|
| **Tap Density** | 4.95 min | ASTM B527 |
| **True Density** | 8.30 min | ASTM B923 |

## Morphology



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

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

* Applicable only for LPBF

MIM: Metal Injection Molding | BJ: Binder Jetting | LPBF: Laser Powder Bed Fusion

**Specification is only for illustrative purposes, and it varies with specific application requirements*