

INDO-SPHERE Tool Steel-D2

D2 is a high-carbon, high-chromium, air-hardening tool steel that is known for its balanced combination of abrasion resistance, toughness and good hardness. 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 |

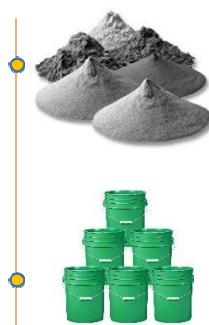
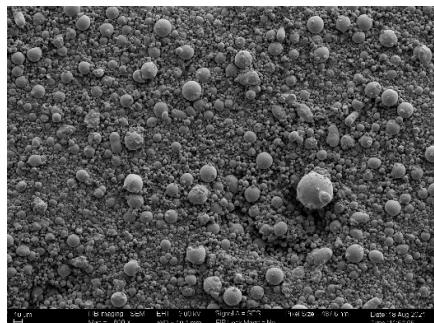
Chemical Composition (weight %)

| Element | Range (%) |
|-------------|-------------|
| Carbon | 1.40 – 1.60 |
| Silicon | 0.10 – 0.60 |
| Manganese | 0.10 – 0.60 |
| Phosphorous | 0.03 max |
| Sulphur | 0.03 max |
| Chromium | 11.0 – 13.0 |
| Molybdenum | 0.70 – 1.20 |
| Vanadium | 0.70 – 1.10 |
| Iron | Balance |

Physical Properties

| Property | g/cc | Test Method |
|---------------------|----------|-------------|
| Tap Density | 4.69 min | ASTM B527 |
| True Density | 7.66 min | ASTM B923 |

Morphology



Customization on chemical composition & particle size can be made.

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

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