

PLM-430L

PLM-430L is ferritic stainless steel combined with good corrosion resistance, ductility, and machinability properties. Its chemical composition corresponds to UNS S43000 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 |

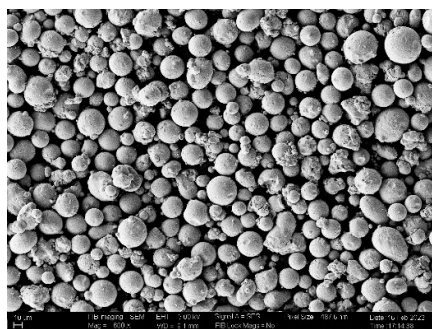
Physical Properties

| Property | g/cc | Test Method |
|--------------|----------|-------------|
| Tap Density | 4.60 min | ASTM B527 |
| True Density | 7.65 min | ASTM B923 |

Chemical Composition (weight %)

| Element | Range (%) |
|-------------|-------------|
| Carbon | 0.03 max |
| Silicon | 1.00 max |
| Manganese | 1.00 max |
| Phosphorous | 0.040 max |
| Sulphur | 0.030 max |
| Chromium | 16.0 – 18.0 |
| Nickel | 0.75 max |
| Others | 0.30 max |
| Oxygen* | 0.06 max |
| Nitrogen* | 0.12 max |
| Iron | Balance |

Morphology



*Applicable only for LPBF

Customization on chemical composition & particle size can be made.

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