

# PLM-316L

PLM-316L is austenitic stainless steel that provides enhanced corrosion resistance in chloride environments. Its chemical composition corresponds to UNS S31603 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      | 5.8 max  | 13.0 max | 25.0 max |
| LPBF  | 15 – 53µm  | 24.0 max | 36.0 max | 54.0 max |

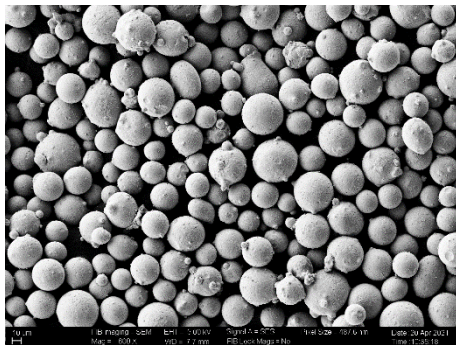
## Physical Properties

| Property     | g/cc     | Test Method |
|--------------|----------|-------------|
| Tap Density  | 4.65 min | ASTM B527   |
| True Density | 7.75 min | ASTM B923   |

## Chemical Composition (weight %)

| Element     | Range (%)   |
|-------------|-------------|
| Carbon      | 0.03 max    |
| Silicon     | 1.00 max    |
| Manganese   | 2.00 max    |
| Phosphorous | 0.045 max   |
| Sulphur     | 0.030 max   |
| Chromium    | 16.0 – 18.0 |
| Nickel      | 10.0 – 14.0 |
| Molybdenum  | 2.00 – 3.00 |
| Others      | 0.30 max    |
| Iron        | Balance     |

## Morphology



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

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