

# INLAND ATOMIZE METAL POWDER LLP

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## IAMP Alloy 713C

**Material:** Nickel Base Super Alloy (UNS N07718)  
**Manufacturing Method:** Vacuum Induction Melting Inert Gas Atomization (VIGA)

### Chemical Composition (Weight %)

| Element | C    | Si   | Mn   | P     | S     | Cr    | Ni    | Mo   | Co   | Nb+Ta | Ti   | Al   | Fe   |
|---------|------|------|------|-------|-------|-------|-------|------|------|-------|------|------|------|
| Min     |      |      |      |       |       | 17.00 | 50.00 | 2.80 |      | 4.75  | 0.65 | 0.20 | Bal. |
| Max     | 0.08 | 0.35 | 0.35 | 0.015 | 0.015 | 21.00 | 55.00 | 3.30 | 1.00 | 5.50  | 1.15 | 0.80 |      |

### Powder Characteristics

- Particle Shape:** Spherical (high sphericity due to gas atomization)
- Flowability:** Excellent, suitable for additive manufacturing and powder metallurgy
- Oxygen Content :** Extremely Low Oxygen content due to VIGA technology
- Tap Density (g/cc):** 4.85 Min.

### Particle Size Distribution

| Application | MIM      | 3D Printing/LPBF | Binder Jetting |
|-------------|----------|------------------|----------------|
| Size Range  | < 22 µm  | 15 – 53 µm       | <25 µm         |
| D90         | 22.0 Max | 54.0 Max         | 25.0 Max       |
| D50         | 13.5 Max | 37.0 Max         | 15.0 Max       |
| D10         | 6.0 Max  | 25.0 Max         | 6.5 Max        |

Customize particle size can be made upon request

### Key Features

- Superior corrosion resistance and mechanical properties.
- Excellent flowability and packing density due to uniform spherical particles.
- Optimized for additive manufacturing, powder metallurgy, and thermal spraying applications.
- Retains composition and properties at high temperatures.
- Supports dense compaction in PM applications and improved sintering behavior.
- Ideal for aerospace, defense, chemical, power generation, additive manufacturing, and high-performance tooling.

### Packaging:

Powder will be supplied by standard packing in Vacuum bag of 5Kg, 10Kg, and 25Kg or can be supplied as per customer special requirement.

### Storage:

Store in a cool, dry, and well-ventilated area away from direct sunlight and moisture. Keep containers tightly sealed and properly labelled to prevent contamination and oxidation. Avoid exposure to open flames, sparks, or static discharge—powder may be combustible in fine particle form

MIM: Metal Injection Molding, BJ: Binder Jetting , LPBF: Laser Powder Bed Fusion  
Specification is only for Reference purposes, and it varies with application requirements