

# INLAND ATOMIZE METAL POWDER LLP

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## IAMP Stellite 12

**Material:** Cobalt Base Super Alloy (UNS R30012)

**Manufacturing Method:** Gas Atomization

IAMP Stellite 12 is a cobalt-based chromium-tungsten alloy powder offering higher hardness and abrasion resistance than Stellite 6 while maintaining good corrosion and galling resistance. It is widely used for thermal spray and cladding applications where severe wear conditions are present.

### Chemical Composition (Weight %)

Element	C	Si	Mn	P	S	Cr	Ni	Mo	W	Fe	Co
Min	1.4					27.00			7.50		Bal.
Max	2.0	2.00	1.00	0.030	0.030	32.00	3.00	1.00	9.50	3.0	

### Key Features

- Excellent metal-to-metal wear and galling resistance
- Spherical Shape due to gas atomization process
- Suitable for HVOF, Plasma Spray, PTA, and Laser Cladding processes
- Higher hardness and abrasion resistance than Stellite 6
- Good abrasion and erosion resistance
- Maintains hardness at elevated temperatures
- Very good corrosion and oxidation resistance
- Produces dense coatings with strong metallurgical bonding
- As deposited Hardness is 45 - 51 HRC
- Apparent Density 4.00 g/cc Min

### Particle Size

- Flame Spray: 45 – 106  $\mu\text{m}$  / 20 – 106  $\mu\text{m}$
- HVOF: 15 – 45  $\mu\text{m}$
- PTA (Plasma Transferred Arc) / Laser Cladding: 45 – 150  $\mu\text{m}$
- Custom made particle size can be made upon request

### Packaging:

Powder will be supplied by standard packing in Plastic Jar of 1Kg, 5Kg, and 25Kg or can be supplied as per customer special requirement.

### Storage:

- Keep in a cool, dry environment away from humidity
- Tumble container before use to ensure powder homogeneity
- Reseal containers immediately after powder withdrawal
- If moisture pickup occurs, dry at 65–95 °C for 120 Minutes with lid loosened
- Remove Silica Gel pouch before using the powder

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