



KRN ALLOYS PVT. LTD.

PRODUCT DATA SHEET

Grade: KBP 10

Product Type: Atomized Bronze Powder
(Bronze 90/10)

Category: Atomized Non-Ferrous Powder

1. PRODUCT DESCRIPTION

Bronze 90/10 is an atomized copper-tin alloy powder developed for powder metallurgy and industrial applications requiring good wear resistance, controlled porosity, and reliable compaction behavior. The grade is widely used in bearing applications and sintered components where strength, wear performance, and lubrication retention are important.

2. KEY CHARACTERISTICS

Property	Typical Value
Apparent Density	2.8 – 3.2 g/cc
Flow Rate (Hall)	22 – 30 sec/50g
Alloy Composition	Cu ~90%, Sn ~10%
Oxygen (O ₂)	≤ 0.30 %

👉 (Higher AD than copper, good flow — correct bronze behavior)

3. CHEMICAL COMPOSITION (%)

Element	Typical (%)
Cu (Copper)	~90
Sn (Tin)	~10
O (Oxygen)	≤ 0.30
Others	Controlled within standard manufacturing limits

4. PHYSICAL PROPERTIES

Property	Description
Particle Shape	Irregular
Production Route	Atomized alloy powder
Compressibility	Good
Wear Resistance	Good
Lubrication Retention	Suitable for porous structures

5. PARTICLE SIZE DISTRIBUTION (PSD)

Fraction	Typical Distribution (%)
+100 mesh (>150 µm)	0 – 2
-100 +200 mesh	10 – 20
-200 +325 mesh	45 – 60
-325 mesh (<45 µm)	15 – 25

* Particle size distribution is controlled to support uniform compaction, porosity control, and stable sintering behavior in bronze-based components.

6. TYPICAL APPLICATIONS

- Self-lubricating bearings
- Bushes and sleeves
- Porous bronze components
- Powder metallurgy wear parts

7. ADVANTAGES

- Good wear resistance
- Suitable for porous bearing structures
- Stable compaction and sintering behavior
- Reliable lubrication retention in PM parts
- Proven alloy system for industrial applications

8. PROCESSING GUIDELINES

- Suitable for PM compaction and sintering
- Can be used with lubrication systems for bearing applications
- Recommended for controlled atmosphere sintering

9. PACKAGING & SUPPLY

- Standard packing:** 25 kg bags / jumbo bags
- Custom packaging available upon request

10. DISCLAIMER

Values are typical and may vary depending on processing conditions and application requirements. This information is intended as a general guide and does not constitute a strict specification guarantee. Users are advised to evaluate the material for their specific intended use.