



KRN ALLOYS PVT. LTD.

PRODUCT DATA SHEET

Grade: KCP 100.29

Product Type: Water Atomized Copper Powder

Category: Atomized Non-Ferrous Powder

1. PRODUCT DESCRIPTION

KCP 100.29 is a water atomized copper powder developed for powder metallurgy and industrial applications requiring improved packing behavior, consistent particle size distribution, and reliable compaction performance.

The grade is suitable for applications where enhanced density and better structural consistency are required compared to standard copper powders.

2. KEY CHARACTERISTICS

Property	Typical Value
Apparent Density	2.5 – 2.9 g/cc
Flow Rate (Hall)	24 – 32 sec/50g
Purity (Cu)	≥ 99.5 %
Oxygen (O ₂)	≤ 0.30 %

👉 (Slightly higher AD and improved flow vs KCP 100.24)

4. PHYSICAL PROPERTIES

Property	Description
Particle Shape	Irregular
Production Route	Water Atomized
Compressibility	Very Good
Conductivity	High
Packing Behavior	Improved compared to standard grades

6. TYPICAL APPLICATIONS

- Copper-based powder metallurgy components
- Structural PM parts requiring improved density
- Diamond tools and industrial formulations
- Electrical and conductive applications

8. PROCESSING GUIDELINES

- Suitable for PM compaction and sintering
- Compatible with alloying elements such as tin, zinc, and graphite
- Recommended storage in dry conditions

3. CHEMICAL COMPOSITION (%)

Element	Typical (%)
Cu (Copper)	≥ 99.5
O (Oxygen)	≤ 0.30
Others	Controlled within standard manufacturing limits

5. PARTICLE SIZE DISTRIBUTION (PSD)

Fraction	Typical Distribution (%)
+100 mesh (>150 μm)	0 – 2
-100 +200 mesh	8 – 18
-200 +325 mesh	50 – 65
-325 mesh (<45 μm)	12 – 20

* Particle size distribution is optimized to improve packing efficiency and compaction response in powder metallurgy and industrial applications.

👉 (Slight shift toward middle fraction — same logic as KIPH vs KIP)

7. ADVANTAGES

- Improved packing density compared to standard copper grades
- Better compaction response in PM processing
- Consistent blending and flow behavior
- Suitable for higher performance applications
- Reliable for both PM and industrial use

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.