KRN ALLOYS PVT. LTD.

PRODUCT DATA SHEET

Grade: KIP 100.29

Product Type: Water Atomized Iron Powder
Category: Atomized Ferrous Powder

1. PRODUCT DESCRIPTION

KIP 100.29 is a water atomized iron powder developed for general powder metallurgy applications requiring balanced apparent density, controlled flow characteristics, and stable compaction behavior.

The grade is designed to deliver consistent performance in standard press-and-sinter operations across a wide range of structural components.

2. KEY CHARACTERISTICS

Property	Typical Value
Apparent Density	2.9 – 3.0 g/cc
Flow Rate (Hall)	25 – 30 sec/50g
Green Density @ 600 MPa	~7.0 g/cc
Oxygen (O_2)	≤ 0.20 %

3. CHEMICAL COMPOSITION (%)

Element	Typical (%)
Fe (Iron)	Balance
C (Carbon)	≤ 0.01
O (Oxygen)	≤ 0.20
Others	Controlled within standard manufacturing limits

4. PHYSICAL PROPERTIES

Property	Description
Particle Shape	Irregular
Production Route	Water Atomized
Compressibility	Good
Flow Behavior	Stable

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 ensure consistent die filling, uniform compaction, and stable sintering response.*

6. TYPICAL APPLICATIONS

- Structural powder metallurgy components
- Automotive PM parts
- Bushes, spacers, and collars
- General press & sinter applications

7. ADVANTAGES

- Balanced apparent density and flow characteristics
- Consistent die filling performance
- Reliable compaction behavior
- Good sintering response
- Suitable for high-volume PM production

8. PROCESSING GUIDELINES

- Recommended compaction pressure: 400 – 700 MPa
- Suitable for conventional sintering atmospheres
- Compatible with standard lubricants and alloy additions

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 customer-specific 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.