KRN ALLOYS PVT. LTD.

PRODUCT DATA SHEET

Grade: KIP 80.29

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

1. PRODUCT DESCRIPTION

KIP 80.29 is a water atomized iron powder developed for powder metallurgy applications requiring economical processing, reliable flow characteristics, and consistent compaction behavior.

The grade is suitable for general-purpose press-and-sinter applications where cost efficiency and stable production performance are key considerations.

2. KEY CHARACTERISTICS

Property	Typical Value
Apparent Density	2.7 – 2.9 g/cc
Flow Rate (Hall)	27 – 33 sec/50g
Green Density @ 600 MPa	~6.90 g/cc
Oxygen (O_2)	≤ 0.20 %

👉 (Slightly lower density vs KIP 100.29 — correct positioning)

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 – 3
-100 +200 mesh	12 – 25
-200 +325 mesh	40 – 55
-325 mesh (<45 µm)	15 – 25

** Particle size distribution is controlled to ensure consistent die filling, stable compaction behavior, and reliable sintering performance.*

👉 (Slightly wider PSD vs 100.29 — practical for cost-grade positioning)

6. TYPICAL APPLICATIONS

- General structural PM components
- Automotive non-critical parts
- Bushes, spacers, and collars
- Cost-sensitive press & sinter applications

7. ADVANTAGES

- Cost-effective solution for PM applications
- Stable die filling and compaction behavior
- Reliable performance in standard sintering processes
- Suitable for high-volume production
- Flexible for a wide range of general applications

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.