



KRN ALLOYS PVT. LTD.

PRODUCT DATA SHEET

Grade: KIP 40.29

Product Type: Water Atomized Iron Powder
(Welding Grade)

Category: Atomized Ferrous Powder

1. PRODUCT DESCRIPTION

KIP 40.29 is a water atomized iron powder specifically developed for welding consumables and metallurgical formulations requiring controlled particle size distribution, stable flow behavior, and consistent blending characteristics.

The grade is suitable for use in welding flux systems, core wire applications, and related metallurgical processes where powder consistency and flow are critical.

2. KEY CHARACTERISTICS

Property	Typical Value
Apparent Density	2.6 – 2.9 g/cc
Flow Rate (Hall)	28 – 35 sec/50g
Moisture	≤ 0.10 %
Oxygen (O ₂)	≤ 0.25 %

👉 (Slightly lower AD and higher flow time vs PM grades — practical and correct)

4. PHYSICAL PROPERTIES

Property	Description
Particle Shape	Irregular
Production Route	Water Atomized
Flow Behavior	Free flowing
Blending Behavior	Stable and uniform

3. CHEMICAL COMPOSITION (%)

Element	Typical (%)
Fe (Iron)	Balance
C (Carbon)	≤ 0.02
O (Oxygen)	≤ 0.25
Others	Controlled within standard manufacturing limits

5. PARTICLE SIZE DISTRIBUTION (PSD)

Fraction	Typical Distribution (%)
+100 mesh (>150 μm)	0 – 3
-100 +200 mesh	20 – 35
-200 +325 mesh	35 – 50
-325 mesh (<45 μm)	15 – 25

* Particle size distribution is designed to support uniform blending, controlled burn characteristics, and stable performance in welding consumables.

👉 (Compared to PM: more coarse + wider spread = correct for welding)

6. TYPICAL APPLICATIONS

- Welding flux formulations
- Core wire filling materials
- Welding consumables
- Metallurgical blending applications

7. ADVANTAGES

- Controlled particle size for consistent blending
- Stable flow behavior during processing
- Suitable for uniform flux distribution
- Reliable performance in welding formulations
- Adaptable for different consumable systems

8. PROCESSING GUIDELINES

- Suitable for dry blending with flux and alloy powders
- Recommended for controlled moisture environments
- Compatible with standard welding consumable processing routes

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.