



KRN ALLOYS PVT. LTD.

PRODUCT DATA SHEET

Grade: **KSP 40.29C**

Product Type: Sponge Reduced Iron Powder
(Coarse Welding Grade)

Category: Sponge Reduced Powder

1. PRODUCT DESCRIPTION

KSP 40.29C is a coarse sponge reduced iron powder developed for welding consumables and core wire applications requiring controlled particle size, reduced fines content, and stable feeding characteristics.

The grade is optimized for processes where powder flow, handling, and uniform filling behavior are critical.

2. KEY CHARACTERISTICS

Property	Typical Value
Apparent Density	2.3 – 2.7 g/cc
Flow Rate (Hall)	28 – 38 sec/50g
Moisture	≤ 0.15 %
Oxygen (O ₂)	≤ 0.35 %

👉 (Slightly improved flow vs fine sponge due to reduced fines)

4. PHYSICAL PROPERTIES

Property	Description
Particle Structure	Porous / sponge-like
Production Route	Reduction process
Surface Area	Moderate (lower than fine sponge grades)
Reactivity	Controlled
Flow Behavior	Improved vs fine grades

6. TYPICAL APPLICATIONS

- Core wire filling materials
- Welding consumables
- Flux formulations requiring coarse powder
- Metallurgical blending applications

8. PROCESSING GUIDELINES

- Suitable for controlled feeding systems and core wire processes
- Recommended storage under low humidity conditions
- Compatible with standard welding consumable manufacturing routes

3. CHEMICAL COMPOSITION (%)

Element	Typical (%)
Fe (Iron)	Balance
C (Carbon)	≤ 0.05
O (Oxygen)	≤ 0.35
Others	Controlled within standard manufacturing limits

5. PARTICLE SIZE DISTRIBUTION (PSD)

Fraction	Typical Distribution (%)
+100 mesh (>150 µm)	10 – 20
-100 +200 mesh	40 – 55
-200 +325 mesh	20 – 30
-325 mesh (<45 µm)	5 – 10

* Particle size distribution is designed to minimize fines and support uniform feeding, controlled blending, and stable performance in core wire and welding applications.

👉 (Clear shift to coarser fraction — this is the key differentiator)

7. ADVANTAGES

- Reduced fines for improved handling and reduced dusting
- Better flow and feeding characteristics
- Stable performance in core wire applications
- Controlled reactivity for metallurgical consistency
- Suitable for automated or continuous feeding systems

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.