



KRN ALLOYS PVT. LTD.

PRODUCT DATA SHEET

Grade: KFS 45

Product Type: Water Atomized Ferrosilicon Powder
(Welding Grade)
Category: Ferro Alloy Powder

1. PRODUCT DESCRIPTION

KFS 45 is a water atomized ferrosilicon powder developed for welding consumables and metallurgical applications requiring controlled silicon addition, uniform particle distribution, and stable blending behavior.

The grade ensures consistent metallurgical performance in welding systems.

2. KEY CHARACTERISTICS

Property	Typical Value
Silicon (Si)	~45 %
Apparent Density	3.0 – 3.5 g/cc
Moisture	≤ 0.10 %

4. PHYSICAL PROPERTIES

Property	Description
Particle Shape	Irregular to semi-rounded
Production Route	Water atomized alloy
Flow Behavior	Free flowing
Blending Behavior	Uniform

6. TYPICAL APPLICATIONS

- Welding flux formulations
- Core wire filling materials
- Metallurgical alloy additions

8. PROCESSING GUIDELINES

- Suitable for blending with flux systems
- Recommended for controlled mixing
- Compatible with welding consumable production

3. CHEMICAL COMPOSITION (%)

Element	Typical (%)
Si (Silicon)	~45
Fe (Iron)	Balance
Others	Controlled within standard manufacturing limits

5. PARTICLE SIZE DISTRIBUTION (PSD)

Fraction	Typical Distribution (%)
+100 mesh (>150 µm)	5 – 15
-100 +200 mesh	30 – 45
-200 +325 mesh	25 – 35
-325 mesh (<45 µm)	10 – 20

* PSD is controlled to ensure uniform distribution and stable blending in welding consumables.

7. ADVANTAGES

- High silicon content for metallurgical control
- Improved blending uniformity
- Better flow compared to crushed alloys
- Consistent welding performance

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.