



## 1. PRODUCT DESCRIPTION

**KSP 100.24** is a sponge reduced iron powder developed for powder metallurgy applications requiring stable compaction behavior, controlled porosity, and consistent performance.

The grade is suitable for general PM applications where sponge structure provides enhanced bonding and sintering characteristics.

## 2. KEY CHARACTERISTICS

Property	Typical Value
Apparent Density	2.3 – 2.6 g/cc
Flow Rate (Hall)	30 – 40 sec/50g
Green Density @ 600 MPa	~6.3 g/cc minimum
Oxygen (O <sub>2</sub> )	≤ 0.35 %

## 4. PHYSICAL PROPERTIES

Property	Description
Particle Structure	Porous / sponge-like
Production Route	Reduction process
Compressibility	Good
Reactivity	Moderate

## 3. CHEMICAL COMPOSITION (%)

Element	Typical (%)
<b>Fe (Iron)</b>	<b>Balance</b>
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)	2 – 8
-100 +200 mesh	25 – 40
-200 +325 mesh	30 – 45
-325 mesh (<45 μm)	10 – 20

*\* PSD is controlled to ensure uniform compaction and stable sintering behavior.*

## 6. TYPICAL APPLICATIONS

- Powder metallurgy components
- Automotive parts
- Structural PM applications
- General press & sinter systems

## 7. ADVANTAGES

- Good compressibility for PM applications
- Enhanced bonding due to sponge structure
- Reliable sintering behavior
- Suitable for structural components

## 8. PROCESSING GUIDELINES

- Recommended compaction: 400–700 MPa
- Suitable for standard sintering atmospheres

## 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.