

# TUNGSTEN POWDER

High-Purity Tungsten Powder (1–5  $\mu\text{m}$ )



## PRODUCT OVERVIEW

SPR Tungsten Powder is a high-purity refractory metal powder specifically produced for industrial applications such as:

- ✓ Cemented carbide (WC)
- ✓ Production
- ✓ Powder metallurgy (PM) parts
- ✓ Wear-resistant components
- ✓ Heavy alloys
- ✓ Radiation shielding
- ✓ Precision machining

Tungsten is widely used where high density, high melting point, and superior mechanical properties are required.



## PRODUCT SPECIFICATIONS

|                    |                           |
|--------------------|---------------------------|
| Brand:             | SPR                       |
| Material:          | Tungsten (W)              |
| Purity:            | $\geq 99\%$               |
| Particle Size:     | 1 – 5 $\mu\text{m}$       |
| Atomic Mass:       | 183.84 g/mol              |
| Density:           | 19.25 g/cm <sup>3</sup>   |
| Melting Point:     | 3422°C                    |
| Crystal Structure: | Body-Centered Cubic (BCC) |
| Packaging:         | 25 kg / 50 kg drums       |
| Origin:            | Turkey                    |



## APPLICATIONS

- ✓ **Cemented Carbide & WC Production**  
Cutting tools, inserts, drills, reamers, milling cutters.
- ✓ **Powder Metallurgy Components**  
High-density, high-strength industrial parts.
- ✓ **Heavy Alloys / Counterweights**  
Balancing weights for aerospace and automotive.
- ✓ **Radiation Shielding**  
Medical X-ray shields industrial shielding applications.



## PRICING (REFERENCE)

| Order Size                    | Incoterm | Price (EUR/kg) |
|-------------------------------|----------|----------------|
| Sample                        | CIF EU   | €170           |
| Trial Order<br>(50 – 500 kg)  | CIF EU   | €170           |
| Mid Volume<br>(500 – 2000 kg) | CIF EU   | €170           |
| Long-Term<br>Contract         | CIF EU   | €170           |

\*Final price based on contract terms and quantity

## CONTACT & ORDERS

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High-density, high-strength industrial parts.
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Balancing weights for aerospace and automotive.
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# TUNGSTEN CARBIDE (WC) POWDER



## High-Purity Tungsten Carbide Powder

Tungsten carbide (WC) is a carbide containing equal amounts of tungsten and carbon atoms, with a purity of 99.95. In its most basic form, tungsten carbide is a fine gray powder, but it can be compressed and sintered into various shapes for use in industrial machinery, engineering structures, mold blocks, cutting tools, pens, abrasives, armor-piercing bullets, and jewelry.



### PRODUCT OVERVIEW

SPR Tungsten Carbide (WC) Powder is a high-purity fine powder specially produced for industrial applications such as:

- ✓ Cutting tools, inserts, drills, reamers, milling cutters
- ✓ Wear-resistant components
- ✓ Hardfacing & armor-piercing applications
- ✓ Mold blocks and precision parts
- ✓ Abrasives and polishing materials
- ✓ Jewelry and decorative products



### PHYSICAL PROPERTIES

| Type | Tapped Density (g/cm <sup>3</sup> ) | Melting Point (°C) |
|------|-------------------------------------|--------------------|
| WC   | 5.5                                 | 2785               |

### CHEMICAL COMPOSITION (%)

| T.C  | F.C | C.C  | Fe   | Mo   | Cr   |
|------|-----|------|------|------|------|
| ~6.2 | 0.1 | 6.05 | 0.05 | 0.02 | 0.01 |



### PRODUCT SPECIFICATIONS

|               |                                |
|---------------|--------------------------------|
| Product       | Tungsten Carbide (WC) Powder   |
| Purity        | ≥ 99.95%                       |
| Appearance    | Fine Gray Powder               |
| Particle Size | Typically D50: 0.5 – 5 µm      |
| Density       | 5.5 g/cm <sup>3</sup> (Tapped) |
| Melting Point | 2785 °C                        |
| Packaging     | 25 kg / 50 kg drums            |
| Origin        | China                          |



### APPLICATIONS

- ✓ **Cutting Tools**  
Drills, reamers, milling cutters, inserts
- ✓ **Wear-Resistant Parts**  
High wear and corrosion resistance applications
- ✓ **Armor-Piercing & Defense**  
Penetrators, bullets, protective components
- ✓ **Mold & Die Industry**  
Mold blocks, punches, dies
- ✓ **Abrasives & Polishing**  
Lapping, grinding, polishing materials
- ✓ **Jewelry & Premium Products**  
Jewelry, luxury goods, decorative parts



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# FERRO TUNGSTEN (FeW) ALLOY



## High-Performance Ferro Tungsten

Ferrotungsten (FeW) is a ferroalloy, consisting of iron and tungsten. Ferro Tungsten is particularly notable for its high melting point. It is a critical material used as an additive in the production of high-strength steels and alloys, enhancing their hardness, wear resistance, and heat resistance properties.



### PRODUCT OVERVIEW

SPR Ferro Tungsten (FeW) Alloy is a high-purity ferroalloy widely used in the steel and foundry industries, offering excellent performance in:

- ✓ Steelmaking and foundry applications
- ✓ Strengthening and alloying additive
- ✓ Wear resistance improvement
- ✓ Heat resistance enhancement
- ✓ Hardness and toughness optimization



### PHYSICAL PROPERTIES

| Type | Size [mm] | Melting Point  |
|------|-----------|----------------|
| FeW  | 10 – 100  | 1650 – 2100 °C |



### CHEMICAL COMPOSITION ON FERRO TUNGSTEN

| Element       | W   | Fe | Al   | Si  | Mn  | S    | C   | P    |
|---------------|-----|----|------|-----|-----|------|-----|------|
| Composition % | ≥70 | 20 | 0.05 | 0.5 | 0.5 | 0.05 | 0.1 | 0.05 |



### PRODUCT SPECIFICATIONS

|                      |                                              |
|----------------------|----------------------------------------------|
| Product              | Ferro Tungsten (FeW) Alloy                   |
| Type                 | FeW                                          |
| Size                 | 10 – 100 mm                                  |
| Melting Point        | 1650 – 2100 °C                               |
| Chemical Composition | As per standard                              |
| Packaging            | 25 kg / 50 kg bags or Customer's requirement |
| Origin               | China                                        |
| Delivery Form        | Lumps                                        |



### APPLICATIONS

- ✓ **Steel Production**  
Used as an additive in the production of high-strength steels and alloy steels.
- ✓ **Alloy Manufacturing**  
Enhances mechanical properties and improves wear and heat resistance.
- ✓ **Cast Iron & Foundry**  
Improves strength, hardness, and wear resistance in cast iron products.
- ✓ **Tool Steel & High-Speed Steel**  
Increases red hardness and heat resistance.
- ✓ **Wear-Resistant Parts**  
Used in components exposed to high wear and impact conditions.



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Balancing weights for aerospace and automotive.
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- ✓ Abrasives and polishing materials
- ✓ Jewelry and decorative products



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