



## Celestine (Strontium Sulfate - SrSO<sub>4</sub>) Specification

---

### 1. Product Name:

Celestine (Strontium Sulfate - SrSO<sub>4</sub>)

### 2. Chemical Formula:

SrSO<sub>4</sub>

### 3. CAS Number:

7759-02-6

### 4. HS Code:

253090

---

## 5. Physical and Chemical Properties

Property	Specification
Appearance	Crystalline powder or prismatic crystals, colorless, pale blue, gray, or yellow
Chemical Formula	SrSO <sub>4</sub>
Density	~3.96 g/cm <sup>3</sup>
Hardness (Mohs)	3 - 3.5
Luster	Vitreous to pearly
Solubility	Insoluble in water, soluble in acids
pH	Neutral
Melting Point	Decomposes at high temperatures
Water Solubility	Insoluble in water

---

## 6. Chemical Composition

Component	Content (%)
Strontium (Sr)	≥ 95%



Component	Content (%)
Sulfate (SO <sub>4</sub> )	≥ 90%
Impurities	≤ 5%

---

## 7. Particle Size Distribution

Size Range (µm)	% by Weight
< 100 µm	≥ 90%
> 100 µm	≤ 10%

(Particle size may be customized according to specific application needs.)

---

## 8. Physical State

- **Form:** Crystalline or powder
  - **Color:** Pale blue, colorless, gray, or yellow, depending on impurities
  - **Odor:** Odorless
- 

## 9. Purity Grades

- **Industrial Grade:** Moderate purity, suitable for glass, ceramics, and drilling applications.
  - **Chemical Grade:** High purity, designed for producing strontium compounds, ideal for electronics, pyrotechnics, and other specialized applications.
  - **Custom Grade:** Tailored to meet specific purity and composition requirements for niche applications.
- 

## 10. Storage and Handling

- **Storage Conditions:** Store in a cool, dry place, away from moisture and direct sunlight.



- **Handling Precautions:** Avoid dust generation. Use appropriate personal protective equipment (PPE) such as gloves, dust mask, and safety goggles.

## 11. Packaging Options

- **Bulk Packaging:** For large industrial orders, typically in large sacks or containers.
- **Sealed Containers:** To prevent contamination and moisture.
- **Custom Packaging:** Tailored packaging solutions to meet specific client needs.

## 12. Applications

- **Glass and Ceramics Manufacturing:** Strontium compounds derived from celestine improve clarity, durability, and color quality.
- **Pyrotechnics and Fireworks:** Used for producing bright red flames in fireworks through strontium nitrate.
- **Electronics:** Essential for manufacturing components like cathode ray tubes (CRTs).
- **Oil & Gas:** Used as a weighting agent in drilling fluids.
- **Medical:** For bone health treatments and dental formulations.

## 13. Quality Control and Testing

Each batch of Celestine is rigorously tested for the following parameters:

Parameter	Acceptable Range
<b>Strontium Content</b>	$\geq 95\%$
<b>Sulfate Content</b>	$\geq 90\%$
<b>Impurity Levels</b>	$\leq 5\%$
<b>Particle Size</b>	Customized as per application
<b>Moisture Content</b>	$\leq 0.5\%$

## 14. Safety and Handling Instructions



- **Precautions:** Handle with care to avoid dust inhalation. Ensure proper ventilation when handling or processing.
- **Personal Protection:** Use safety goggles, gloves, and a dust mask when handling in large quantities.