



TECHNICAL DATA SHEET

Potassium Sulfate

Product name: Potassium Sulfate

Alternative name: Sulfate of Potash

Abbreviation: SOP

Chemical formula: K_2SO_4

CAS number: 7778-80-5

EC number: 231-915-5

Molecular weight: 174.26 g/mol

Product Description

Potassium Sulfate is a white, water-soluble potassium fertilizer. It supplies potassium and sulfur without adding significant chloride, making it suitable for chloride-sensitive crops.

Typical Specification

Property	Typical Value
Potassium as K_2O	50–52% minimum
Sulfur as S	17–18% minimum
Chloride as Cl	1.0–1.5% maximum
Moisture	0.5–1.0% maximum
Water-insoluble matter	0.1% maximum
Appearance	White crystalline powder or granules
Odour	Odourless
pH	Approximately 5.5–7.5
Water solubility at 20°C	Approximately 110–120 g/L

Values may vary according to grade and manufacturer.

Main Features

- High potassium content
- Provides plant-available sulfur
- Low chloride content
- Fully or highly soluble in water
- Suitable for chloride-sensitive crops



- Supports fruit quality, colour and crop development
- Suitable for soil and selected fertigation applications

Applications

Potassium Sulfate is commonly used for:

- Fruits and vegetables
- Tobacco
- Potatoes
- Grapes and citrus crops
- Greenhouse crops
- Fertilizer blending
- Compound fertilizer production
- Fertigation, using fully soluble grades

Physical Properties

Property	Information
Physical form	Crystals, powder or granules
Colour	White to off-white
Density	Approximately 2.66 g/cm ³
Melting point	Approximately 1,067°C
Flammability	Non-flammable
Solubility	Soluble in water

Storage and Handling

- Store in a cool, dry and ventilated place.
- Protect from moisture and direct sunlight.
- Keep bags tightly closed.
- Avoid generating or breathing dust.
- Use gloves, safety glasses and suitable work clothing.
- Keep away from incompatible chemicals and food products.

Packaging

Common packaging options include:

- 25 kg bags
- 50 kg bags



- 500–1,250 kg jumbo bags
- Bulk supply

Packaging availability depends on the supplier.

Shelf Life

The recommended shelf life is approximately **24 months** when stored in unopened packaging under cool and dry conditions.

Safety Information

Potassium Sulfate is generally not classified as hazardous. Dust may cause temporary irritation to the eyes or respiratory tract. Refer to the applicable Safety Data Sheet before handling.

Disclaimer

The information in this TDS represents general or typical values and is not a guaranteed product specification. Actual composition, nutrient content, particle size and solubility may vary by grade and manufacturer. Refer to the supplier's specification and certificate of analysis for confirmed values.