



Technical Data Sheet (TDS) – Potassium Sulfate

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Report Document

Report Topic					
Technical Data Sheet (TDS) – Potassium Sulfate					
Purpose of Report					
Awareness and clarification of the specifications and chemical analysis of the potassium sulfate product					
Target Audience					
Organization stakeholders (including colleagues, customers, consumers, etc.)					
Other required details					
Revision number	Writing start date	Date of completion of writing	Prepared by	Approved by	Description
00	2025-1-23	2025-1-23	Amir Hossein Haratian	Amir Rafie	Initial writing
01					
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Introduction:

This report outlines key parameters and essential criteria contained in the technical data sheet of product. It also presents the national and international standard benchmark, and evaluates Asia Potash Industry Company's product accordingly.

Potassium Sulfate

Grades Produced:

Potassium sulfate is produced in three grades at this factory:

- Granular
- Micronized powder
- Crystalline powder

General Product Information:

Parameter	Value
Common Product Name	Potassium Sulfate Fertilizer (Sulphate of Potash – SOP)
IUPAC Name	Potassium Sulfate
CAS Number	7778-80-5
Appearance	White powder (granular, crystalline, or micronized)
Manufacturer	Asia Potash Industry Company
Country	Iran
Province	Semnan

Technical Specifications Based on KS 2422:2018

Parameter	Standard (KS 2422:2018)	Worst Case	Product (Actual)
Appearance	White powder (granular/crystal)	Same	Same
K ₂ O (min)	51.5%	47.3%	51.88%
Cl ⁻ (max)	0.5%	1.9%	1.7%
Moisture (max)	0.5%	1.9%	0.15%
S (min)	18%	16.91%	17.77%
pH (1% solution)	4–5	—	3.7

Heavy Metal Analysis (Based on KS 2422:2018)

Metal	Standard (KS 2422:2018)	Product
Arsenic (As)	20 ppm	-
Cadmium (Cd)	7 ppm	-
Mercury (Hg)	0.1 ppm	-
Selenium (Se)	1 ppm	-
Lead (Pb)	30 ppm	-
Chromium (Cr)	500 ppm	-

Important Note:

The parameters listed above are aligned with international data sheet standards. However, domestic data sheets follow another structure and include the following criteria per **Iran National Standard ISIRI 128**.

Properties of Potassium Sulfate Fertilizer (ISIRI 128):

Parameter	Product Value	National Standard
Chemical Formula	K_2SO_4	—
Appearance	White powder (granular/crystal)	—
K_2O	51.88%	Min. 50%
MgO	0.5%	Max. 2%
Cl^-	1.7%	Max. 2.5%
CaO	1%	Max. 2.5%
S	17.5–18.3%	Min. 17.5%
NaCl (powder form)	1–2.5%	2% (max)
NaCl (granular form)	—	3% (max)
Moisture	0.15%	Max. 1.5%