

Technical Data Sheet

Monopotassium Phosphate

Chemical Name	Monopotassium Phosphate	CAS Number	7778-77-0
Synonyms	MKP; Potassium Dihydrogen Phosphate; Potassium Phosphate monobasic; Phosphoric acid, potassium salt (1:1)	EINECS Number	231-913-4
		Chemical Formula	KH ₂ PO ₄
		MW, g/mol	136.09

SUMMARY: Monopotassium phosphate (MKP) is the inorganic, free flowing, crystalline powder. It is often used as a fertilizer, food additive, and buffering agent. The salt often co-crystallizes with the dipotassium salt as well as with phosphoric acid. Single crystals are paraelectric at room temperature. At temperatures below -238 °F, they become ferroelectric.

SPECIFICATIONS

ITEM	UNIT	STANDARDS	TYPICAL
Purity	% min.	99.0	99.1
Appearance	—	white crystalline powder	white crystalline powder
Phosphorous [P]	% min.	22.60	22.70
Phosphorous Pentoxide [P ₂ O ₅]	% min.	52.00	52.10
Potassium [K]	% min.	28.60	28.61
Potassium Oxide [K ₂ O]	% min.	34.00	34.02
pH of 1% Solution	—	4.3—4.7	4.3—4.7
Moisture	% max.	0.10	0.10
Arsenic [As]	ppm, max	50.0	40.0
Chloride [Cl]	% max.	0.025	—
Water Insoluble material	% max.	0.01	0.01

MAIN USES

Monopotassium phosphate is the most highly concentrated in phosphorus soluble PK fertilizer (0-52-34). It is used both in protected and open field for any phenological stages of plant development, also for foliar application. MKP is 100% soluble in water and is quickly absorbed by plants, which allows to use it for root application through irrigation systems. It is especially recommended to use in hydroponics, as it does not contain chlorine and any insolubles.

MKP can be mixed with all water-soluble fertilizers, except for calcium fertilizers and concentrated magnesium solutions. In hydroponic systems, it should normally be added to the B tank along with the sulfates and trace elements. MKP has a buffering effect, which will help stabilize the pH of the solution at around 4.5.

STANDARD PACKAGING

25 kg or 1,000 kg woven bags with PE liner.

WAREHOUSING AND STORAGE LIFE

MKP is stored and transported in 25 kg or 1000 kg woven polypropylene bags with an inner liner.

SPECIAL ADVISE FOR SECURITY

This product must be used and handled following the usual precautions for all chemical substances consulting the safety data sheet.