

Mono-Potassium Phosphate 0-52-34

Multi-MKP is a fully water-soluble mono-potassium phosphate fertilizer, a highly efficient source of phosphorus and potassium for plants. As a nitrogen-free fertilizer, Multi-MKP is the preferred source of phosphorus and potassium when nitrogen fertilization should be limited. A common case is at early growing season, when phosphorus and potassium are needed at high rates for the establishment of root system. Application of Multi-MKP at the productive stages of sugar-rich fruit crops helps to increase sugar content and to improve the quality of these.

Multi-MKP can be applied in combination with other fertilizers to meet crop nutritional needs throughout the growth cycle.

Its high purity and water-solubility make Multi-MKP an ideal fertilizer for fertigation and for foliar application. Additionally, Multi-MKP is suitable for preparation of fertilizer blends and production of liquid fertilizers. When applied as foliar spray, Multi-MKP acts as a suppressor of powdery mildew.

The advantages of Multi-MKP

- Fully water-soluble
- Consists of 100% plant nutrients
- Free of chloride, sodium and other detrimental elements for plants
- Safe for plants and humans: has a moderately low pH and low salt index
- Suitable for the fertigation, foliar application and production of fertilizer blends and nutrient solutions

Product analysis

Nutrient	Content (%)
P ₂ O ₅	52%
P	22.7%
K ₂ O	34%
K	28.7%



Water solubility

The solubility of Multi-MKP is enhanced by increase in water temperature, as shown in the following table.

Water temperature (°C)	0	10	20	30	40
Solubility (g/100g water)	14.8	18.3	22.6	28.0	33.5

pH and EC

Multi-MKP has a moderately low pH that remains almost constant at different concentrations.

Concentration (%)	0.1	0.2	0.3	1.0	5.0
pH	4.8	4.7	4.7	4.6	4.4

The electrical conductivity (EC) increases substantially when high concentrations of Multi-MKP are used, and yet, its low salt index assures safe use.

Concentration (%)	0.1	0.2	0.3	1.0	5.0
EC (mS/cm)	0.72	1.42	2.13	6.5	33.5

Application Recommendations

Nutrigation

It is recommended to use Multi-MKP as a source of phosphorus and potassium where nitrogen levels should be kept low.

Because of its unique characteristics, Multi-MKP can be applied through any irrigation system and on any growth medium. Unlike phosphoric acid, Multi-MKP is moderately acidic (see table on the 1st page). Therefore, it is not corrosive to fertilizer pumps or to irrigation equipment.

Compatibility

Multi-MKP is compatible with most water-soluble fertilizers, except for fertilizers containing calcium (Ca⁺⁺) or magnesium (Mg⁺⁺). To apply Multi-MKP in combination with calcium or magnesium fertilizers, use two fertilizer tanks. If only a single fertilizer tank is available, apply those fertilizers at different times.

Quantitative Nutrigation

Each kilogram of Multi-MKP in the tank provides 520 grams of P₂O₅ (230g P) and 340 grams of K₂O (280g K).

Proportional Nutrigation

The phosphorus and potassium concentration in the irrigation water depends on the quantity of Multi-MKP in the tank mix, and on the injection ratio. Use the following table to calculate the quantity of Multi-MKP and the injection ratio needed to reach your target concentration in the irrigation water.

Multi-MKP (g/1000 liter water)	Nutrient concentration (ppm, g/1000 litre)			
	P ₂ O ₅	P	K ₂ O	K
100	52	22	34	28
110	58	25	37	31
135	70	30	46	38
180	93	40	61	51
225	116	50	76	63

Foliar Feeding

Foliar application of Multi-MKP is an optional supplement to soil fertilization at growth stages when high levels of phosphorus and potassium are required. At early season foliar application with Multi-MKP promotes the establishment of healthy root system.

Multi-MKP is an efficient suppressor of powdery mildew in susceptible crops (deciduous, vineyards, mango, cucumbers, melons, roses and others). Application of 1% Multi-MKP mixed with systemic fungicides improves the efficiency and enable to reduce application rates of the latter.

Multi-MKP is compatible with most commonly used pesticides and fertilizers. However, it should not be mixed with calcium or magnesium fertilizers. Also, iron, manganese, zinc and copper must be in the form of chelates.

Field-crops and vegetables: On young leaves, spray concentration of 1.0% Multi-MKP is recommended in most crops. On mature leaves and more tolerant crops, concentration of 2.0% may be applied.

Fruit-trees:

Crop	Conc.	Timing
Citrus	3-5%	2-3 successive monthly sprays at early fruit development, starting 1 month after fruit-set
Stone fruits	1-2%	2-4 applications from fruit-set to fruit coloring
Table grapes	1-2%	1 application during fruit-set, 1 during ripening
Bananas	1-2%	2-6 applications with the application of pesticides
Vineyards	2%	1 application during fruit-set, 1 during ripening
	1%	Every 2 weeks, starting when twigs are 10-14cm long until veraison, alternated with proper fungicide.
Olives	3-5%	1 application in early spring for flower induction and fruit setting, 2 applications during fruit development, 1 application on September during sizing and oil filling.

It is advisable to confirm compatibility of your intended spray-mix by preparing a sample of the spray materials at their recommended concentrations in order to rule out the possibility of a detrimental cross reaction. This mixture should be sprayed onto small area prior to commercial treatment, in order to assess whether an adverse effect occurs.