



MENAFERT

Product leaflet

Advanced POLYPHOS AQUA

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Optifos has a double purpose. Firstly, it helps keep your dripping system free from anorganic pollution and prevents pipelines and drippers from becoming clogged. Secondly, it increases the phosphates available to the plant and thereby improves the phosphate uptake.

Optifos is a mixture of different polyphosphates, chains of orthophosphates. A plant can only absorb orthophosphates. The mixture of polyphosphates available in Optifos are unique due to the moment the polyphosphates hydrolyse into orthophosphates.

Optifos will hydrolyse under the influence of root activity and become therefore fully available for the plant. This in contrary to many other polyphosphates which are often too stable and will not hydrolyse in the root zone. In that case the phosphate will be unsuitable as a nutrient.

Optifos does not hydrolyse before it reaches the root zone. It will therefore not precipitate in the fertigation system and will fulfil its task as a cleaner. It's cleaning capability can be explained by the fact that polyphosphates are characterized by their ability to bind cations to their hydroxyl groups. Even cations precipitated in the dripping system can be bound.

For a complete overview of our Calcium products, please visit our website: www.menafert.com

Product characteristics

- Prevents anorganic pollution of the dripping systems and therewith clogged drippers
- Increases phosphates available to the plant as well as cations; such as calcium and magnesium
- Specially recommended during periods of intensive growth and when the pH in the irrigation system tends to increase due
- to limited usage of water and / or usage of irrigation water with a high level of bicarbonates.

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Manual for using Optifos

Dosing instructions:

In order to keep the system clean, 20% of the total phosphates required should be given as Optifos, this is about 0,5 mmol / l. In order to increase phosphate availability, about 40% of the total phosphates should be exchanged, this is about 1,0 mmol / l.

Stepstones:

In case of working with the two tank principle, Optifos should be dosed in the B-tank, separately from the trace elements and calcium nitrate.

1. Fill your tank for 10% with water and add the required acid
2. Flush your filling lines
3. Add Optifos. Be careful: CO₂ will be set free and can cause foaming
4. Flush your filling lines
5. pH should be below 5. Add extra acid in case needed, in order to overcome a white precipitation
6. Add other required fertilizers

Conversion table

Standard source of phosphate used	Keeping a clean system (0,5 mmol / l)	Increasing phosphate availability (1,0 mmol/l)
Using Phosphoric Acid 59%	Add: 14,6 l Optifos 15,0 l Nitric Acid 38% Reduce: 5,8 l Phosphoric Acid 59% 11,5 kg Potassium Nitrate HG	Add: 29.2 l Optifos 30.0 l Nitric Acid 38% Reduce: 11,7 l Phosphoric Acid 59% 23,0 kg Potassium Nitrate HG
Using Monopotassium Phosphate	Add: 14,6 l Optifos 8,7 l Nitric Acid 38% Reduce: 6,8 kg Monopotassium Phosphate HG 6,5 kg Potassium Nitrate HG	Add: 29,2 l Optifos 17,3 l Nitric Acid 38% Reduce: 13,6 kg Monopotassium Phosphate HG 13,0 kg Potassium Nitrate HG

Using	Add:	Add:
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Monoammonium Phosphate	14,6 l Optifos 8,7 l Nitric Acid 38% 6,2 l Ammonium Nitrate Liquid	29,2 l Optifos 17,3 l Nitric Acid 38% 12,4 l Ammonium Nitrate Liquid
	Reduce: 6,8 Kg Monoammonium Phosphate HG 12 kg Potassium Nitrate HG	Reduce: 13,6 Kg Monoammonium Phosphate HG 24 kg Potassium Nitrate HG

Crops

Keeping a clean system with Optifos:

Using Optifos to keep a clean fertigation system is advisable in all crops. In order to guarantee the best cleaning effect of Optifos, it is also important to start with a clean fertigation system at the beginning of the crop cycle. Secondly it is essential to use the right pH level. Besides that it is important to filter your water and use high quality fertilizers.

Increasing phosphate availability with Optifos

Crop	Effect of Optifos
Roses	<ul style="list-style-type: none"> • Better availability of phosphates resulting in an increased length of the stem • Increase of the size of the bud and increase of weight • Improved activity of root system
Fruity vegetables, grown on Hydroponics (e.g. pepper/tomato)	<ul style="list-style-type: none"> • Improved activity of root system • Quicker recovery of plant after a period of heavy fruiting • Decreased change on blossom end rot
Ornamentals/pot plants	<ul style="list-style-type: none"> • Improved activity of root system • Increase of general health of the plant with an improved general performance • Improved color of the leaves and larger plants with a higher weight
General effects	In general Optifos is used to get your crop through difficult periods related to stress. Stress due to e.g. extreme temperatures, lack of light or a period of heavy fruiting.