

Hydroponic Pro Mix

Botswana Reg. No W1301142
Namibian Reg. No. N-F 0757

FERTILIZER GROUP 1

Powder Fertilizer

COMPOSITION:

Nitrogen (N)	59 g/kg
Phosphorous (P)	45 g/kg
Potassium (K)	252 g/kg
Sulphur (S)	44 g/kg
Magnesium (Mg)	28 g/kg
Zinc (Zn)	294 mg/kg
Copper (Cu)	49 mg/kg
Molybdenum (Mo)	59 mg/kg
Iron (Fe)	1300 mg/kg
Boron (B)	616 mg/kg
Manganese (Mn)	286 mg/kg



REGISTERED AND MANUFACTURED BY:

Plaaskem (Pty) Ltd
Reg No./ Nr. 1972/013867/07
PO Box 14418
WITFIELD
1467
Tel: 011 823 8000

Mass: **500g / 1kg / 5kg / 10kg / 25kg**
BATCH NO.

UN No: **Not regulated**

GENERAL INFORMATION

Hydroponic Pro Mix is a water soluble combination of plant nutrients suitable for use in hydroponic (soilless) crop production systems, and when used together with potassium sulphate and/or calcium nitrate it is a balanced source of macro and micronutrients. When **Hydroponic Pro Mix** is applied to the irrigation water as directed, the nutrients are readily available and provide for optimum plant growth and high yields of good quality.

WARNINGS

GHS HAZARD STATEMENTS

Harmful if swallowed.
Causes serious eye damage.
Very toxic to aquatic life with long lasting effects.

PRECAUTIONS

GHS PRECAUTIONARY STATEMENTS

Prevention

Obtain, read, and follow all safety instructions before use.
Wash thoroughly after handling.
Do not eat, drink when using this product.
Wear impervious rubber gloves and boots, protective clothing, and chemical safety goggles.

Response

If exposed or concerned, get medical advice.

Storage

Store locked up.

Disposal

Dispose of contents/container in accordance with local and national regulations.

RELEVANT SUBSTANCES:

Substance name (IUPAC/EC)	Concentration % by weight	GHS Classification
Boric Acid	<1%	Reproductive Toxicity (Category 1B), H360FD.

NOTE: The other ingredients not included above, do not cause or contribute towards the correct GHS classification of **Hydroponic Pro Mix** and are therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021; Regulation 14(b), not listed.

APPLICATION RATE (g per 1000 ℓ water)

CROP	HYDROPONIC PRO MIX	CALCIUM NITRATE	POTASSIUM SULPHATE	Expected EC at 25°C in distilled Water.
CUCUMBERS 1. Summer 2. Winter	1000 1000	1000 900	- 140	1.68 mS/cm 1.96 mS/cm
TOMATOES 1. To flowering of third Truss. 2. Post third Truss flowering	1000 1000	640 640	- 230	1.42 mS/cm 1.86 mS/cm
CELERY, LETTUCE & LEAF CROPS 1. Summer 2. Winter	1000 1000	740 640	- 140	1.67 mS/cm 1.71 mS/cm
FLOWER CROPS 1. Summer 2. Winter	1000 1000	740 640	- 140	1.67 mS/cm 1.71 mS/cm

PREPARING A CONCENTRATED SOLUTION

This method may be followed when it is possible to dispense the concentrate solution into the irrigation lines by means of fertilizer diluters. To prepare a 100 times concentrate, dissolve 10 kg **Hydroponic Pro Mix** in 100 litres of water in a tank. Apply Potassium Sulphate (Horticultural Grade), when required at a rate of 1,40kg or 2,30kg per 100 litres of water. (10 times the quantity as indicated in the table above).

Calcium Nitrate must be dissolved in a separate tank away from the **Hydroponic Pro Mix**. Once again use 10 times the quantity indicated in the table per 100 litres water. To use this concentrate solution, mix 1 part from the first tank and 1 part from the second tank, together with 98 parts irrigation water. These concentrated solutions should be injected simultaneously but separately into the main irrigation line (i.e., by using 2 injection pumps). Should the solutions mix in the concentrated form a precipitate will immediately form. To prevent this, injection points in the main line should be at least 3 m apart.

The above is just one example of a concentrate solution. Other more convenient methods may be used so long as, after mixing with the irrigation water, the concentrations are similar with those as indicated in the table. It is not recommended that concentrate solutions of **Hydroponic Pro Mix** in excess of 100 x be made up.

PREPARING A SOLUTION FOR DIRECT APPLICATION:

To prepare 1000 litres of nutrient solution for direct application, dissolve 1000 g **Hydroponic Pro Mix** in 500 litres of water. Add a further 250 litres of water and if Potassium Sulphate is required add at the recommended rate and stir until dissolved. Finally add the last 250 litres of water together with Calcium Nitrate. In both circumstances it is important that the solutions are well agitated prior to application.

PRECAUTIONS

Concentrated solutions of **Hydroponic Pro Mix** and Calcium Nitrate must not be mixed together at levels where precipitates form. In situations where plants are grown in containers it is advisable that these containers be leached periodically. Only high quality raw materials are used in the manufacture of **Hydroponic Pro Mix**. In spite of this a small, insoluble residue might occur in the tank. The quantity of sediment that occurs is largely dependent on the water quality. Should this sediment be particularly bad or cause problems of another nature it is recommended that the water and sediment be analyzed and contact made with your AECL Plant Health Crop Adviser. Never add acid to the **Hydroponic Pro Mix** solution which would drop the pH below 4.5 as this would be detrimental to the chelated trace elements in this mix. Additional magnesium nitrate or magnesium may need adding when plants are under undue stress or high yield periods; this supplement would be in the region of 100g per 1000L.