

IONIC®



IONIC is a translucent liquid containing a full profile of precisely formulated minerals. It can supply all the nutritional requirements of fast growing plants, especially those grown under lights. The unique process by which IONIC is made allows us to stabilise the pH and for the majority of growers it will need very little adjustment at all.



IONIC HYDRO GROW & BLOOM

Designed for NFT, Flood & Drain and all types of passive hydroponics.



HARD WATER

Special formulations are available for hydroponic growers in hard water areas. See notes on hard water below.



IONIC for SOIL GROW & BLOOM

These formulations of **IONIC** can be used with fertile soil mixes or with artificial soils. They are precisely formulated for the needs of plants in soil and are heavily fortified with complex organic plant acids, which will enhance the health and vitality of the soil as well as the plant.



IONIC for COCO GROW & BLOOM

These formulations of **IONIC** can be used with Coco (coir) either in the slabs or in the loose form. They are precisely formulated for the needs of plants in Coco and are enriched with complex organic plant acids, which will enhance plant performance and crop yields.

IONIC PK BOOST

PK BOOST is a nutrient supplement designed to be used in the final few weeks before harvest. **PK BOOST** allows the grower easy control of the extra phosphorus and potassium that can lead to bumper yields.

PK BOOST is an ideal addition to any of the **IONIC BLOOM** formulations but it can also be used very effectively with any good quality nutrient solution of the **BLOOM** variety.



GROW and BLOOM

IONIC nutrients are supplied in two distinct formulations. The **GROW** formulation is designed to supply the needs of the plant during the vegetative stage of its growth cycle. **IONIC BLOOM** formulations are dedicated to the fruiting and flowering stage of plant growth, containing enhanced levels of phosphorus and potassium, the elements required for development of buds and flowers.

Hard Water

There are areas of hard water in every country where **IONIC** is sold. This is of concern mainly to hydroponic growers and we recommend **IONIC HW** formulations for all hydroponics in hard water areas. **IONIC HARD WATER** solution is much more acidic than the standard formulation. This is achieved

For more information on
IONIC nutrients, please visit
www.growthtechnology.com

by careful selection of the component mineral salts. A more acidic solution will neutralise bicarbonates

on its own. This will reduce the amount of acid needed to control the pH and thus reduce the chance of phosphate accumulation. **IONIC HARD WATER** solution is also specially formulated to take account of the minerals, such as calcium, that are usually present in hard water. This will reduce the problems associated with hard water and allow the grower to maintain his tank for longer periods between changes.

Soil and Coco growers in hard water areas are advised to use the normal **SOIL** and **COCO** formulations of **IONIC** for best results. It will be necessary to pay close attention to pH which will need correcting downwards at times.

Designed by professionals... fine-tuned by experience

Instructions for use

IONIC



IONIC – any formulation

1. Calculate total tank volume.
2. Add **IONIC** at 7 ml/litre (e.g. for a 10 litre tank add 70 ml).
3. Stir thoroughly, running the pump if possible.
4. Check conductivity of the solution. (See chart below for recommended levels.) Add more nutrient if necessary.
5. Check pH of solution.
6. If required, adjust using Growth Technology **pH UP** or **pH DOWN**.

SPECIAL NOTE

IONIC is manufactured by a revolutionary process. It produces a clear translucent liquid without precipitation or sediment. However under certain conditions there may be a few flat white crystals in the bottle. These are the end products of the complex manufacturing reactions and are accounted for in that process.

They have absolutely no significance in terms of the formulation and can safely be ignored.

IONIC PK BOOST

1. Make up an **IONIC BLOOM** formulation in the usual way.
2. Stir tank thoroughly.
3. Add **IONIC PK BOOST** to tank at the rate of 1 ml/litre.
4. Stir again then check and correct the pH.
5. Use nutrient in the normal way. **IONIC PK BOOST** can be added to the tank on a weekly basis throughout the flowering/fruiting cycle of growth.



pH

pH is a measurement of the acidity or alkalinity of a solution. On a scale of 0–14 neutrality is represented as 7. The ideal pH for almost all hydroponic applications is 5.5–6.2. pH for RockWool cultivation should be on the low side, ideally about 5.5–5.8. **IONIC** nutrients are especially formulated to ensure that pH is close to 6 when made up with reasonably clean water. Unfortunately water quality varies dramatically from place to place. You may find therefore that you need to make small adjustments to your nutrient tank from time to time.

It is very important to check pH the first time you make up **IONIC** solution. As long as your reading is within the acceptable range you need make no adjustments to pH at this time. You should keep a regular check on pH at all times.

For more information on pH,
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Conductivity

The conductivity of a solution is a measure of the ability of that solution to conduct an electric current. Conductivity increases with increased concentration of dissolved mineral salts, so we can use it to determine the “strength” of a nutrient solution.

Conductivity is usually expressed in terms of EC or CF. The table below gives suggested EC values for **IONIC** nutrients in various applications. To convert the EC values to CF just multiply by ten.

IONIC Applications

Application	Nutrient	pH Range	EC	Notes
SOIL	IONIC for SOIL	5.5–6.2	1.5 mS	Pre-treatment with GreenMyst Humic will be helpful.
COCO	IONIC for COCO	5.5–6.2	1.5 mS	Pre-treatment with GreenMyst Humic will be helpful.
PERLITE	IONIC HYDRO	5.5–6.2	2.0 mS	Flush regularly. Check pH and EC in saucers daily.
ROCKWOOL Passive	IONIC HYDRO	5.5–5.8	1.5 mS	Flush regularly. Monitor the drain water.
ROCKWOOL Re-circulate	IONIC HYDRO	5.5–5.8	1.5 mS	Check and correct the pH and EC daily,
FLOOD & DRAIN	IONIC HYDRO	5.5–6.2	2.0 mS	Check and correct the pH and EC daily.
NFT	IONIC HYDRO	5.5–6.2	2.0 mS	Check and correct the pH and EC daily.



IONIC nutrients are available in the following sizes:
300 ml (PK Boost only) • 1 litre • 2 litre • 5 litre • 20 litre

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