



pH REDUCER

A CITRIC ACID SOLUTION

- **SOIL AND WATER pH CONDITIONER**
- **CONTROLS ALGAE**
- **SOIL pH REDUCER**

F106

ALSO CONTAINS NON-PLANT FOOD INGREDIENTS

50% Citric Acid
0.0025% Wetting Agent

PRODUCT SPECIFICATIONS:

pH 1.5
Weight per gallon (Liter) 8.4 lbs. (1.00 kg)

PRODUCT DESCRIPTION:

pH Reducer is designed for soil and water applications, where the pH needs to be lowered into a more acidic range. Citric Acid solution is an organic based material that is a natural and environmentally sound management tool for lowering alkaline soil conditions.

SOIL CONDITIONER:

Turf Applications: Many calcareous soils have very high pH ranges (above 7) that make turf grass maintenance difficult. This also tends to tie up many micronutrients, leaving turf grasses chlorotic. USGA spec sands and top dressings usually have a high pH and need to be lowered to an ideal range of 6 to 6.5 pH. Apply at a rate of 2 to 6 oz. per 1,000 sq. ft. on a monthly basis. Some soils contain high levels of minors that are often in an unavailable, oxidized form not available for plant uptake. By applying citric acid solutions, minors can be chelated and made more available for turf grasses. pH Reducer can be used in place of sulfuric acid and ammonium sulfate.

Trees and Ornamentals: Many plant materials prefer acid soil in the pH range of 5 to 6.5. Soil pH is often above 7 from high calcium levels. By applying pH Reducer as a root injection or soil drench, soil pH can be lowered slowly and gently without any detrimental effects to the plant materials. Apply at a rate of 2 to 4 oz. per 1,000 sq. ft. or 1 qt. of pH Reducer in 100 gal of water.

Greenhouse Soil Mixes and Composting: pH Reducer is an ideal product to help reduce the pH of many soils and soil-less mixes.

WATER pH REDUCER:

Many water supplies have very high pH levels, and continuous application of this water will tend to raise the pH of many soils. By adding citric acid solution, hard water levels can be lowered. This will also reduce the possibility of soil pH drifting upwards. The buffer capacity of every water supply differs. Be sure to slowly add citric acid to a tank mix and check with a pH meter or litmus paper until the desired pH is reached. If tank mix is not used the same day it is mixed, be sure to check pH again and adjust if necessary.

TANK MIX BUFFER SOLUTION:

Many herbicides and fungicides require an

- **TANK MIX BUFFER SOLUTION**
- **CERTIFIED ORGANIC**
- **CHELATES MICROS BOUND IN THE SOIL**

acidic tank mix solution to assure the best efficacy.

Be sure to slowly add citric acid to a tank mix and check with a pH meter or litmus paper until the desired pH is reached. DO NOT FREEZE.



Application Rates

Application	Rate	Frequency / Notes
Warm & Cool Season Turf Applications	2-6 fl oz in a minimum of 2 gal water per 1,000 ft ² (60-177 ml per 100 m ²)	Apply Monthly Ideal pH Range 6 - 6.5
Trees & Ornamentals	Soil Drench: 1 quart per 100 gallons of tank mix (250 ml per 100 L water) DBH: 5 gal mix per inch	Repeat the application every 30 days or as needed. Ideal pH Range 5 - 6.5
Greenhouse Growing Media	100 - 150 ppm rate Initial Application: Mix 4 - 6 fl oz per 1 gallon water (118 - 177 ml per 4 L water)	If pH is not sufficiently lowered, continue to adjust pH over several waterings, at a rate of 2-4 fl oz per gal water. (60 - 118 ml per 4L water)
Hand Watering	Mix 1/2 - 3/4 teaspoon pH Reducer per gallon water	Saturate soil with solution

How To Determine Buffering Capacity

Water pH	Rate / Frequency
Highly Alkaline Irrigation Water	Before adding any other chemicals or fertilizers to tank mix. Begin with the addition of 2 fl oz per 100 gallons of tank mix. Measure pH of water to determine shift. Add another 2 fl oz of pH Reducer until acceptable pH is reached. (60 ml per 400 L water)

EQUIPMENT & TANK CLEANING:

Mixing: pH Reducer is acidic. It must first be diluted with water prior to mixing with other nutrients or technical materials. pH Reducer should not be added in concentrate to highly alkaline materials. Hard and alkaline water sources will leave residues and mineral build up on tanks, lines and irrigation heads. Flush tanks and lines with a solution of 1 gallon citric acid to 100 gallons of water. Follow by flushing with water to rinse out lines to clean out drip irrigation systems.

FIRST AID	
IF SWALLOWED:	Call a poison center or doctor if you feel unwell: Rinse mouth.
IF IN EYES:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.
IF ON SKIN:	Remove contaminated clothing and wash skin with plenty of soap and water. If skin irritation occurs, get medical advice/attention.
IF INHALED:	Call a poison center or doctor if you feel unwell.
You may also contact 1-800-992-5994 day or night for emergency treatment information. If medical advice is needed, have product container or label at hand (P101), Keep out of reach of children (P102), Read label before use (P103).	
STORAGE: Keep container tightly closed. May be stored in unheated area, but keep from freezing. Store in areas inaccessible to children and pets.	
DISPOSAL: Dispose of contents/container in accordance with local/regional/national/international regulations. Do not reuse container.	

The following precautionary statements and pictograms are based on The Globally harmonized System of Classifications and Labeling of Chemicals (GHS) and are mandated by the Occupational Safety and Health Administration (OSHA)



WARNING

H319 Causes Serious Eye Irritation

Condition of Sale and Warranty: Growth Products, Ltd. warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. Handling, storage and use of the product by Buyer or User are beyond the control of Growth Products, Ltd. and Seller. Risks such as crop injury or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property, or failure to follow label directions will be assumed by Buyer or User. IN NO CASE WILL GROWTH PRODUCTS, LTD. OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.

Manufactured in the USA By: 

