

Reactor®

Reactor is a unique water conditioner, acidifier and softener which is low hazard and highly effective





Reactor is a blend of multiple components, created specifically to be added to water solutions to aid nutrient availability and maximise the performance of foliar applied nutrients and agrochemicals.

The performance of foliar and root applied fertilisers and some agrochemicals is impeded when mixed in water which is either Alkaline, Hard, Brackish, or contaminated with insoluble deposits.

Many farms and nurseries are forced to use sources of water which are either of high pH (over 7.0) or are 'hard', containing significant levels of calcium, magnesium or bicarbonate ions.

Often where water is collected from chalk or limestone rocks the water has both these characteristics and their influence is distinct and seriously affects the availability of nutrients and will leave unwanted deposits on irrigation and spray nozzles, container surfaces and crop.

CROPS

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|  Brassicas |  Top Fruit |
|  Leafy Salads |  Stone Fruit |
|  Potatoes |  Vines |
|  Carrots/Parsnips |  Citrus Fruit |
|  Legumes |  Soft Fruit |
|  Fruiting Vegetables |  Ornamentals |

Effect of pH

In such conditions, expensive agrochemicals and fertilisers are prone to rapid hydrolysis or precipitation resulting in poor performance due to loss of active ingredients particularly when multi-product spray or stock tank mixing is required. In spray tanks pesticides can quickly degrade and this is measured by the time taken for 50% of the active to be broken down. This process is called the 'half-life'.

In nutrient stock solutions, nutritional elements are far more difficult to dissolve and deposits are formed in stock tanks or irrigation lines reducing performance of the product applied and the irrigation system overall.

Use

- To buffer the pH of a tank solution to improve compatibility of contents
- To aid dissolution of nutrients in a stock mix
- Reduce the surface tension of a solution to help prevent foaming.
- To provide more even coverage of foliar application, and shorten mixing time
- To maximise the efficacy of pesticides
- Help keep irrigation lines clean and clear lime scale and other unwanted deposits
- To maximises the availability of rootzone nutrients.



What is Reactor?

A unique blend of multiple components which are effective in reducing water hardness and pH where it is required. Reactor contains:

- Complexed organic base acidifiers to reduce pH and hydrolysis.
- A long chain polymer based water softener.
- A sequestering agent to isolate excessive cationic contaminants.
- Buffering agents to improve tank mixing compatibility.

Reactor is a safe and easy to use liquid which does not require the protective clothing and apparatus associated with other aggressive acidifiers such as nitric and phosphoric acid.

It has no nutritional benefit to water so will not require stock tank or spray tank mix correction to use.



Application and Mixing

For irrigation

Reactor has the acidification/softening potential of a 30% nitric acid solution however as Reactor is not an aggressive acid it uses the blend of its component parts to react with the water to reduce pH, therefore it is not ideal for use with acid dosing rigs. Reactor works best when added to a stock tank mix at the recommended rate which will be governed by the bicarbonate level. The following levels can be used as guideline.

For spray tanks

The ideal pH for spray tanks to allow the best efficacy for most pesticides is 5.5. Reactor is unique as it can also reduce the influence of high levels of cations which naturally occur in some waters and may react with the pesticides applied. To reduce the spray tank to the correct level work out the required amount of Reactor required using a 1 litre jug test. Using a pH meter add reactor to the water drop by drop until the required pH is achieved then simply calculate the total requirement by multiplying by your spray tank volume.

Bicarbonate level	Rate per 100L stock
100mg/l	1.4 litres
150mg/l	2.7 litres
200mg/l	4.0 litres
250mg/l	5.5 litres
300mg/l	7.0 litres

Compatibility

Reactor is made to be compatible with all products and waters and will aid any spray tank mix.

For detailed rates of application or addition to irrigation systems please contact your Engage Advisor or read the label before use.

For more detailed application rates per crop, please visit engagecropsolutions.com or speak to an Engage advisor.

Always read the label before use.

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