

# BUFF-IT<sup>+</sup>

## SPRAY ADJUVANT

Improves performance of agrichemical products through excellent wetting and buffering.

Nonionic Surfactant 545 g/L

- ▣ Assists retention of spray droplets on target
  - ▣ Helps spread droplets to cover more of the target surface
- Buffers to pH 4 -5
- ▣ Protects sensitive products from degradation or loss of activity due to high pH (greater than 8.0) spray water
  - ▣ Built-in indicator shows when pH is in the optimum range
- APVMA Registered Product – Approval Number 60131

### Product Description

BUFF-IT is a unique blend of nonionic surfactant and buffers designed to protect and enhance the performance of a wide range of agricultural products. BUFF-IT buffers spray water into pH range 4 – 5 which helps prevent sensitive agrichemicals from breaking down or being deactivated. BUFF-IT has a balanced buffer system which does not allow the pH to go below pH 3.5 (unlike comparable products).

pH 4-5 is considered a safe pH;

- ▣ for products which are sensitive to alkaline hydrolysis (eg. Dimethoate, Gibberellic Acid, Glyphosate)
- ▣ for sensitive crops which may be damaged by highly acidic or alkaline solutions

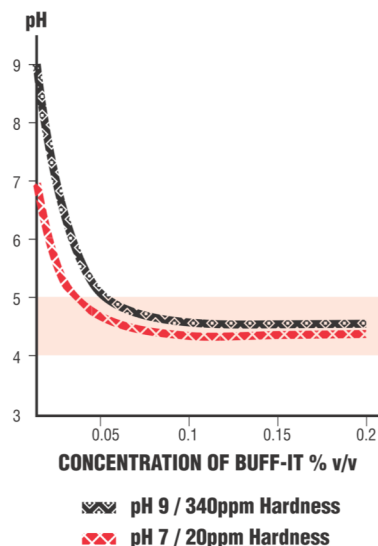
The built-in indicator changes from very faint orange-yellow to a brighter pink / red as pH drops below 5. The wetting agent (nonionic surfactant) in BUFF-IT helps retention of spray droplets on plant surfaces and spreading of droplets across the surfaces. Retention and spreading enable more of the active ingredient to be available for uptake into the target.

### Product Performance

BUFF-IT will control the pH of spray water into a narrow pH range near 4.5 regardless of the pH or hardness of the water used (See Graph 1). BUFF-IT has been shown to increase the efficacy of Glyphosate in neutral pH spray water (pH 7) and to be particularly effective in high pH water (pH 9). BUFF-IT was also found to be more effective than some other buffer or acidifier products that are recommended for use with Glyphosate. (See Graph 2)

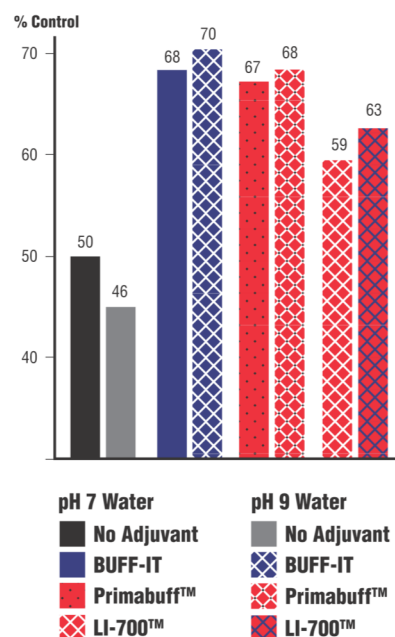
Results shown are average of 2 rates of Glyphosate (55 & 110g a.i./ha) and 2 rates of each adjuvant (0.05% & 0.2%)

GRAPH 1: Spray Water pH Control



GRAPH 2:

Trial: Glyphosate + Buffers / Acidifiers to control oats



Plant - Oats 1.5-2 leaf  
Results -  
Fresh weight 14 days after treatment

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### Suggestions for use

BUFF-IT can be used wherever a wetting agent is recommended and is particularly suited to situations where both wetting and pH control are required.

BUFF-IT has been found to be compatible with a wide range of agrichemical products including;

- ❑ Glyphosate products
- ❑ GALA<sup>†</sup> Growth Regulator and other Gibberellic Acid based products, other growth regulators eg. Ethrel\*, Cycocel\*
- ❑ Fungicides including Rovral\* and Sumislex\*
- ❑ Insecticides including Dimethoate

Use rate is in the range 125 - 250ml/100L.

Use moderate (125 - 150mL / 100L) or high (up to 250mL / 100L) where any of the following exist;

- ❑ Poor water quality
  - Alkaline water > pH 8
  - Hardness >100ppm as CaCO<sub>3</sub>
- ❑ When using with pH sensitive product
- ❑ When using with a product which recommends a wetting agent

### General Specifications

Appearance	Bright Red viscous liquid
pH @ 0.25% in water	4.0 - 4.5
Specific Gravity (20°C)	1.05 g/ml

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### The Company

Victorian Chemical Company is committed to providing quality products and professional and friendly service, that our customers can confidently rely on to add value to their businesses. In order to achieve this goal we will continue to develop, our understanding of our customer's requirements, the operations of our company and our technical expertise.

### Key Benefits

- ❑ Increased performance of certain agricultural products when used as directed
- ❑ Protects sensitive products from alkaline hydrolysis
- ❑ Indicator shows when you have optimum pH
- ❑ Compatible with most agricultural products and spray water

#### Safety and Environment

BUFF-IT is generally soft on plants and beneficials. It has been found to have low potential for adverse effects such as leaf burn. BUFF-IT has been screened for phytotoxicity against a range of sensitive plants (grapes, lettuce, apples & tomatoes) and beneficials (Parasitic wasp, *Trichogramma carverae*, Green lacewing *Mallada signatus* & Predatory Mite *Typhlodromus Occidentalis*.) Whilst many adjuvant products can cause significant harm, BUFF-IT has been found to be one of the softest wetting agent or buffer products available and hence can be used with confidence in a wide range of situations. We would always recommend that when using BUFF-IT in a new or sensitive situation, test by application to a small area before using it on a full-scale basis. BUFF-IT is not recommended for use over or nearby waterways.

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AGR52 260614