

Technical Bulletin

RSA 10% Liquid Boron

RSA MicroTech
P.O. Box 39, Marysville, WA 98270
1.800.426.5969 www.rsamicrotech.com

Introduction

Boron functions in the plant include flower formation and pollination, differentiation of meristematic cells, cell wall integrity, water management, and carbohydrate metabolism and sugar movement. Boron also influences frost resistance (fruit trees and vines), sugar levels (potatoes and sugar beets), vitamin C (fruits and vegetables) and calcium utilization (fruit, potatoes, vegetables).

Boron deficiency is a wide spread problem and associated with many physiological diseases. Deficiency may result in poor flower development, fruit set, seed development, death of terminal growth, malformed leaves, and soft or necrotic spots in fruit or tubers.



Areas predisposed to low boron include those that are low in soil organic matter, sandy soil, high pH, or those farmed for many years.

Boron is a non-mobile nutrient in plants. As a result, it must be supplied throughout the growing season. This can be accomplished by applying small amounts at regular intervals.

Crops Labeled

All crops where a soluble source of boron is needed or would be advantageous.

Use Rates

10% Liquid Boron use rates vary depending on local recommendations.

General use rates are:

Soil- 2 to 8 quarts per acre

Foliar- 1 to 2 quarts per acre in enough water for good coverage

Ground concentrate- up to 2 quarts in 25 gallons of water per acre

Air- up to 1 quart in 5 gallons of water per acre.

Timing and Placement

10% Liquid Boron may be applied to the soil or as a foliar treatment. Foliar applications may be made at 10 to 14 day intervals during rapid growth and/or fruiting stages.

10% Liquid Boron can be applied by ground, air or through drip irrigation. For drip irrigation, apply the recommended rates at 1 to 2 week intervals.

Application immediately after irrigation or rainfall gives the best uptake of nutrients.



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10% Liquid Boron also is compatible with most pesticides and NPK fertilizer solutions.

Product Performance

Boron concentration (ppm) in corn tissue seven days after boric acid and Solubor® application.		
Boron applied (lbs/A)	Boric Acid	Solubor
0	8.2	8.9
1	11.8	10.4
2	13.7	12.6
4	17.5	15.4

Source: US Patent Office, Standard Oil patent.
Boron applied to twelve inch corn.

In comparison to Solubor (sodium borate), 10% Liquid Boron (boric acid) has a number of advantages:

Boric Acid

the form the plant absorbs

contains no sodium

rapid and complete uptake-

higher concentration in plant

Sodium Borate

must be converted to a usable form

contains sodium

must be converted-

slower accumulation,

lower concentration

Precautions

Avoid foliar applications when plants are under moisture stress, such as periods of high temperatures or low humidity. Do not exceed 2 quarts per acre in any one foliar application. Add 10% Liquid Boron to the spray tank before other pesticides.

Contents

Boron (B).....10%
Derived from boric acid.

Technical Specifications

Product class fertilizer
Formulation liquid
Weight/ gallon 11 pounds
Specific gravity 1.32
pH 6-7.2
Solubility in water miscible
Appearance light brown clear
Odor no odor
Min. storage temp. 32°F
Container size 2 x 2.5 gallons

This bulletin provides some technical information and is not intended to give complete information for all applications. Always read and follow label directions.

10% Liquid Boron is manufactured for RSA MicroTech.

Solubor is a registered trademark of U.S. Borax and Chemical Corp.

