

ALPINE MicroBolt Mn

NUTRIENTS SUPPLIED (grams per litre):

Soluble Potash (K₂O)..... 133.0
Manganese (Mn)..... 79.8

PRODUCT PROPERTIES:

Weight: 1.33 kg/L
pH: 6.8-7.5
Appearance: pink liquid
Odor: slightly musty

GENERAL PRODUCT INFORMATION:

ALPINE MicroBolt Mn™ micronutrient is manufactured by utilizing the highest quality raw materials to provide a very agronomically efficient source of plant available Manganese. The chelate used is compatible with high orthophosphate products. ALPINE MicroBolt Mn micronutrient delivers:

- Maximum plant nutrient solubility – in furrow or foliar
- Minimal salt index
- No application equipment corrosion
- Compatibility with most other liquid fertilizers
- Tank mixable with most pesticides
- Low impurities

FIRST AID: Please see MSDS sheet for more information, call (800) 265-2268 or visit us online at www.alpinepfl.com.

THE FOLLOWING CONDITIONS MUST BE OBSERVED IN ORDER TO APPLY ALPINE MicroBolt Mn MICRONUTRIENT. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN DAMAGE TO THE PLANTS:

- DO USE ALPINE MicroBolt Mn micronutrient under conditions of optimum plant growth including highest humidity, moderate temperature and adequate soil moisture.
- DO USE sufficient water to provide thorough coverage.
- DO consult with your local ALPINE Agronomist or Sales Manager to determine pesticides which are compatible with ALPINE MicroBolt Mn micronutrient.
- DO consult your local ALPINE Agronomist or Sales Manager for rate and application instructions.
- DO USE a small jar or container prior to full scale mixing to proportionally mix all the components to confirm compatibility.
- DO NOT use when the crop is under stress from pests, heat or inadequate soil moisture.
- DO NOT apply during the heat of the day.

*THESE ARE GENERAL PRODUCT RECOMMENDATIONS. PLEASE CONSULT WITH YOUR AUTHORIZED ALPINE DEALER OR ALPINE DISTRICT SALES MANAGER FOR SPECIFIC FERTILITY RECOMMENDATIONS.



the starter fertilizer company®

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product recommendations • • • • •

APPLICATION RATE*:

Use ½ to 1 L/ac either in furrow or as a foliar spray.

Optimum rate of application will vary between fields, depending on soil pH and organic matter content. Product should be used on the basis of soil and/or tissue analysis.

Maximum of 2L/ac of any combination of micronutrients when mixed with a seed placed starter fertilizer.

MIXING INSTRUCTIONS

1. Put 1/3 water or fertilizer in the tank
2. Add correct amount of product
3. Fill tank with balance of water or fertilizer
4. Agitate adequately to mix

ROLE OF MANGANESE

- Manganese assists Iron in Chlorophyll production
- Catalyst in oxidation-reduction process
- Manganese affects lignin building qualities and is critical in preventing lodging & disease
- Manganese is crucial when growing oats
- Glyphosate has been linked to Manganese deficiencies
- With glyphosate translocating within the root mass of weeds and RR crops thus leaking into the root rhizosphere, this immobilizes Manganese which is required for the growth of many plants
- Without Manganese, there is no seed production (i.e. seedless grapes, oranges have no Manganese)

MANGANESE SOIL AVAILABILITY

- Manganese is not available when soils are cold in spring because Manganese starts out in the Mn⁴⁺ state, must convert to the Mn³⁺ state and then convert to the Mn²⁺ state to be available to the plant. The fungus "Take-all" root rot oxidizes early Manganese availability, reducing lignification of roots, making them more susceptible to infections. This is where a GREAT SEED TREATMENT WORKS.
- Reduced lignifications also can create lodging problems
- Foliar, seed-placed or seed-treated with Manganese are ways to correct Mn deficiencies but seed-treated and seed-placed treatments are preferable.
- 9-12 ppm in soil test is medium amount

MANGANESE IN THE LEAF

- Sufficiency tissue test ranges in ppm
 - Canola: 60-110
 - Small grains: 30-60
 - Peas: 40-70
 - Corn: 30-100 at tasseling
 - Soybeans: 35-100

DEFICIENCIES SYMPTOMS

- Low pollen fertility and reduced 1000 kernel or bushel weight are symptoms of Manganese deficient crops.
- In cereals greenish grey spots

SELLER WARRANTS THAT THE ABOVE PRODUCT CONFORMS TO ITS CHEMICAL DESCRIPTION AND IS REASONABLY FIT FOR THE PURPOSE ON THE LABEL WHEN USED IN ACCORDANCE WITH DIRECTIONS UNDER NORMAL CONDITIONS OF USE (INCLUDING NORMAL WEATHER CONDITIONS). NEITHER THIS WARRANTY NOR ANY OTHER WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EXPRESS OR IMPLIED, EXTENDS TO THE USE OF THIS PRODUCT WHEN USED CONTRARY TO THE LABEL INSTRUCTIONS OR UNDER ABNORMAL CONDITIONS (INCLUDING ABNORMAL WEATHER CONDITIONS), AND THE BUYER ASSUMES THE RISK OF ANY SUCH USE. ALPINE STARTER OR FOLIAR APPLICATIONS ARE INTENDED TO SUPPLEMENT EXISTING SOIL FERTILITY PROGRAMS AND WILL NOT BY ITSELF PROVIDE ALL THE NUTRIENTS NORMALLY REQUIRED BY AGRICULTURAL CROPS.

THIS FERTILIZER CONTAINS MANGANESE AND SHOULD BE USED ONLY AS RECOMMENDED. IT MAY PROVE HARMFUL WHEN MISUSED.

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