# MAN-8

# **Liquid Manganese**



# TECHNICAL BULLETIN

#### **DESCRIPTION**

**MAN-8** contains manganese which is an essential micronutrient, combined with sulfur to promote plant growth. Many processes are dependent on manganese, including chloroplast formation, photosynthesis, nitrogen metabolism and synthesis of some enzymes.

Manganese (Mn) is required by plants in the second greatest quantity compared to iron. Like any other element, it can have a limiting factor on plant growth if it is deficient or toxic in plant tissue.

#### **BENEFITS**

- Promotes dark green leaf color in palm trees and other plants
- Supports the photosynthetic pathway in all plants
- Improves plant respiration of atmospheric carbon dioxide
- Promotes root cellular elongation
- Supports resistance to root pathogens
- Improves nitrogen metabolism within the plant
- · Promotes stress tolerance
- · Easy-to-use liquid formula
- Use year-round

#### **APPLICATION**

#### SHAKE WELL OR STIR BEFORE USE.

**MAN-8** is highly concentrated. Dilute with water prior to application to ensure adequate coverage. Jar test for compatibility prior to final tank mixing with other products.

**AGRICULTURE & HORTICULTURAL:** Apply 1-4 quarts per acre every 30 days with a fertilizer injection system or sprayer.

**GREENS, TEES & TURF:** Foliar apply 1-2 quarts per acre in 25-50 gallons of water per acre or for smaller areas apply 1-2 ounces per 1000 square feet in 5-10 gallons of water. Apply every 7-10 days or as needed with sprayer. Water normally following application.

**FOLIAR FEEDING TREES & SHRUBS:** Dilute 1-2 quarts in 100 gallons of water and spray on foliage to point of runoff.

**DEEP ROOT FEEDING TREES & SHRUBS:** Dilute 1-2 quarts in 100 gallons of water along with Biofeed ARBOR-PLUS™.

#### **PHYSICAL CHARACTERISTICS**

Appearance: Brown liquid Weight: 10.6 lbs./gal. pH Range: 7.2-8.2

Enzymatic activity may affect pH during storage.

#### **GUARANTEED ANALYSIS**

Sulfur (S)	. 4.0%
Manganese (Mn)	. 8.0%

Derived from Manganese Sulfate.

ALSO CONTAINS NON-PLANT FOOD INGREDIENT: 10.0% Organic Matter

#### **AVAILABILITY**

United States of America

- 1-quart (0.95 L) bottles
- 2.5-gallon (9.46 L) jugs
- 30-gallon (113.56 L) drum
- 55-gallon (208.2 L) drum
- 275-gallon (1040.99 L) tote

Other Countries

- 1-Liter (0.26 gal) bottles
- 10-Liter (2.64 gal) jug
- 208-Liter (54.95 gal) drum
- 1040-Liter (274.74 gal) tote

# STORAGE AND DISPOSAL

Store at 50°-95°F / 10°-35°C. Do not store in direct sunlight. Keep product in the original container and store in cool, dry area. Triple rinse when empty for recycling. Always dispose of container in accordance with local, state and federal regulations.

#### **WARNING**



KEEP OUT OF REACH OF CHILDREN. MAY BE HARMFUL IF SWALLOWED. CAUSES MILD SKIN IRRITATION. CAUSES EYE IRRITATION.

SDS available upon request.

Information regarding the contents and levels of metals in this product is available on the internet at: http://www.aapfco.org/metals.html

### **CONDITION OF SALE**

The information herein is believed to be accurate and reliable. Buyer and user assume all liability from use of this material. Follow directions carefully. Timing, method of application, weather, plant, crop or turf conditions and other factors are beyond the control of the seller.



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