



# MATERIAL SAFETY DATA SHEET

Name of Product:

**NACHURS MicroBolt Mn™**

Product #: F000102

Revision Date: Aug 3, 2012

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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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PRODUCT NAME: NACHURS MicroBolt Mn™  
SYNONYMS: 6% Manganese EDTA; Liquid micronutrient solution  
PRODUCT CODES: F000070, F000102, F000386

MANUFACTURER: NACHURS ALPINE SOLUTIONS®  
DIVISION: Marion  
ADDRESS: 421 Leader Street, Marion, OH 43302, United States

EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)

CHEMICAL NAME: Disodium salt manganese oxide Ethylenediaminetetraacetate Chelate water solution  
CHEMICAL FAMILY: Chelated Micronutrient solution- Mn  
CHEMICAL FORMULA: N/A

PRODUCT USE:

PREPARED BY: NACHURS ALPINE SOLUTIONS®

SECTION 1 NOTES:

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## SECTION 2: HAZARDS IDENTIFICATION

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EMERGENCY OVERVIEW:

ROUTES OF ENTRY: Inhalation, Ingestion, Injection, Absorption

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation  
SKIN: May cause irritation  
INGESTION: May cause irritation  
INHALATION: May cause irritation

ACUTE HEALTH HAZARDS: N/A

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

CARCINOGENICITY:

OSHA: N/A  
ACGIH: N/A  
NTP: N/A  
IARC: N/A  
OTHER: N/A

SECTION 2 NOTES:

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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|             |   |       |
|-------------|---|-------|
| INGREDIENT: | Manganese Oxide (CAS: 1344-43-0)                  | 7.8%  |
|             | Ethylenediaminetetraacetate Acid (CAS: 139-333-3) | 34.5% |
|             | Potassium Hydroxide (CAS: 1310-58-3)              | 14.4% |

CAS NO.:

% WT:

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% VOL:  
SARA 313 REPORTABLE: N/A  
pmm:  
mg/m3:

OSHA PEL-TWA: N/A  
OSHA PEL STEL: N/A  
OSHA PEL CEILING: N/A

ACGIH TLV-TWA: N/A  
ACGIH TLV STEL: N/A  
ACGIH TLV CEILING: N/A

SECTION 3 NOTES:

## SECTION 4: FIRST AID MEASURES

EYES: Flush with water immediately and thoroughly for 15 minutes. Seek medical attention.  
SKIN: Wash with plenty of soap and water. Remove contaminated clothing and wash before reuse.  
INGESTION: SEEK MEDICAL ATTENTION IMMEDIATELY. CALL AND EMERGENCY ROOM, PHYSICIAN, OR POISON CONTROL.  
If significant amounts have been swallowed, give individual large amounts of water or milk to drink for dilution effect.  
INHALATION: Under normal circumstances, is not an inhalation hazard. If misted and inhaled, seek medical attention.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 4 NOTES:

## SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR: UPPER: N/A  
(% BY VOLUME) LOWER: N/A

FLASH POINT:  
F°: N/A  
C°: N/A

METHOD USED: N/A

AUTOIGNITION TEMPERATURE:  
F°: N/A  
C°: N/A

NFPA HAZARD CLASSIFICATION:  
HEALTH: 1  
FLAMMABILITY: 0  
REACTIVITY: 0  
OTHER: 0

HMIS HAZARD CLASSIFICATION  
HEALTH: 1  
FLAMMABILITY: 0  
REACTIVITY: 0  
PROTECTION:

EXTINGUISHING MEDIA: N/A

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SPECIAL FIRE FIGHTING PROCEDURES: Wear positive pressure self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

HAZARDOUS DECOMPOSITION PRODUCTS: Nitrogen Oxides may be released if dried product is burned.

SECTION 5 NOTES:

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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ACCIDENTAL RELEASE MEASURES: Prevent product from entering drinking water supplies or streams. Contain material with dike and pump into container or use inert absorbent material. Place in proper container for disposal according to local, state and federal regulations.

SECTION 6 NOTES:

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## SECTION 7: HANDLING AND STORAGE

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HANDLING AND STORAGE: Do not store in aluminum or copper containing metal containers.

OTHER PRECAUTIONS: N/A

SECTION 7 NOTES:

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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ENGINEERING CONTROLS: N/A

VENTILATION: Provide adequate ventilation for local areas.

RESPIRATORY PROTECTION: Respiratory protection is not required under normal circumstances. If material is misted, use appropriate NIOSH approved respirator or self-contained breathing apparatus.

EYE PROTECTION: Chemical splash goggles and full-face shield.

SKIN PROTECTION: Rubber gloves.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear impervious clothing.

WORK HYGIENIC PRACTICES: N/A

EXPOSURE GUIDELINES: N/A

SECTION 8 NOTES:

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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APPEARANCE: Clear to amber liquid.

ODOR: Slightly musty odor.

PHYSICAL STATE: Liquid  
pH AS SUPPLIED: 6.8-7.2  
pH (Other):

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**BOILING POINT:**

F°: 220

C°: 106

**MELTING POINT:**

F°: N/A

C°: N/A

**FREEZING POINT:**

F°: N/A

C°: N/A

**VAPOR PRESSURE (mmHg) @**

F°: N/A

C°: N/A

**VAPOR DENSITY (AIR = 1) @**

F°: N/A

C°: N/A

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1)** 1.319

**DENSITY, LBS/GAL:** 10.99

**EVAPORATION RATE:** N/A

**SALTING-OUT TEMPERATURE** 20°F

**SOLUBILITY IN WATER:** Complete

**PERCENT SOLIDS BY WEIGHT:**

**PERCENT VOLATILE:** By volume approx. 55% water

BY WT

BY VOL @F°: N/A

C°: N/A

**VOLATILE ORGANIC COMPOUNDS (VOC):** None

WITH WATER LBS/GAL:

WITHOUT WATER LBS/GAL:

**MOLECULAR WEIGHT:** N/A

**VISCOSITY:** N/A

**SECTION 9 NOTES:**

## SECTION 10: STABILITY AND REACTIVITY

|   | STABLE  | UNSTABLE |
|---|---|----------|
| STABILITY:                              | x   |          |
| CONDITIONS TO AVOID (STABILITY):        | Extreme heat or fire.                                       |          |
| INCOMPATIBILITY (MATERIAL TO AVOID):    | Avoid contact with aluminum or copper containing metals.    |          |
| HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: | Nitrogen Oxides may be released if dried product is burned. |          |
| HAZARDOUS POLYMERIZATION:               | Will not occur.   |          |

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CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 10 NOTES:

## SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: N/A

SECTION 11 NOTES:

## SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Do not allow entry into drinking water.

SECTION 12 NOTES:

## SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: As product should have Ph of less than 12.5 and would not be considered a hazardous waste according to EPA regulation 40CFR261. Dispose of in accordance with state and local regulations.

RCRA HAZARD CLASS: N/A

SECTION 13 NOTES:

## SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION:

PROPER SHIPPING NAME: NACHURS MicroBolt Mn™

HAZARD CLASS: N/A

ID NUMBER: N/A

PACKING GROUP: N/A

LABEL STATEMENT: N/A

Health: 1                      Flammability: 0                      Reactivity: 0                      Specific: None

WATER TRANSPORTATION:

PROPER SHIPPING NAME: NACHURS MicroBolt Mn™

HAZARD CLASS: N/A

ID NUMBER: N/A

PACKING GROUP: N/A

LABEL STATEMENT:

Health: 1                      Flammability: 0                      Reactivity: 0                      Specific: None

AIR TRANSPORTATION

PROPER SHIPPING NAME: NACHURS MicroBolt Mn™

HAZARD CLASS: N/A

ID NUMBER: N/A

PACKING GROUP: N/A

LABEL STATEMENTS:

Health: 1                      Flammability: 0                      Reactivity: 0                      Specific: None

OTHER AGENCIES:

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SECTION 14 NOTES:

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## SECTION 15: REGULATORY INFORMATION

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U.S. FEDERAL REGULATIONS:

TSCA (TOXIC SUBSTANCE CONTROL ACT): Yes

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): No

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): N/A

311/312 HAZARD CATEGORIES: N/A

313 REPORTABLE INGREDIENTS:

STATE REGULATIONS:

INTERNATIONAL REGULATIONS:

SECTION 15 NOTES:

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## SECTION 16: OTHER INFORMATION

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OTHER INFORMATION:

PREPARATION INFORMATION: Technical Services

**DISCLAIMER:** The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and NACHURS ALPINE SOLUTIONS® will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein. This Material Safety Data Sheet is valid for three years.