



**THE ANDERSONS  
SAFETY DATA SHEET**

DATE PREPARED: 2/27/24

CURRENT AS OF: 2/27/24

**SECTION 1: PRODUCT / SUPPLIER IDENTIFICATION**

PRODUCT CODE: 10000984, 10000875, 10001201  
PRODUCT NAME: MICRONOURISH® FE CITRIC CHELATED SOLUTION  
PRODUCT USE: Fertilizer  
MFR INFO: The Andersons, Inc.  
PO Box 119  
Maumee, OH 43537  
FOR EMERGENCY: (800) 757-8951  
FOR INFORMATION: (419) 893-5050

**SECTION 2: HAZARDS IDENTIFICATION**

HAZARD SYMBOLS / STATEMENTS:



**WARNING**

**CAUSES SERIOUS EYE IRRITATION  
CAUSES SKIN IRRITATION  
CAUSES RESPIRATORY IRRITATION**

HAZARD CLASSIFICATIONS:

*EYE IRRITATION*

*SKIN IRRITATION*

*SPECIFIC TARGET ORGAN TOXICITY*

- *SINGLE EXPOSURE*

CATEGORY

2A

2

3

INTERPRETATION

Causes serious eye irritation

Causes skin irritation

Causes irritation to respiratory tract

PRECAUTIONARY STATEMENTS:

- *WEAR PROTECTIVE GLOVES AND CLOTHING*
- *REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE*
- *AVOID BREATHING VAPORS/MISTS*
- *IF INHALED: MOVE TO FRESH AIR AND KEEP COMFORTABLE. SEEK MEDICAL ATTENTION IF UNWELL*
- *USE ONLY OUTDOORS OR IN WELL-VENTILATED AREA*
- *CALL POISON CONTROL OR SEEK MEDICAL ATTENTION IF YOU FEEL UNWELL*
- *WASH THOROUGHLY AFTER HANDLING*
- *DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT*
- *IF SWALLOWED: RINSE MOUTH AND SEEK MEDICAL ATTENTION*
- *IF IN EYES OR ON SKIN: RINSE AREA WITH PLENTY OF WATER, REMOVE CONTACT LENSES*
- *IF EYE OR SKIN IRRITATION CONTINUES: SEEK MEDICAL ATTENTION*

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### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<u>CHEMICAL IDENTITY</u>	<u>SYNONYM</u>	<u>CAS NUMBER</u>	<u>CONCENTRATION (%)</u>
Urea		57-13-6	5-20
Citric Acid		77-92-2	10-20
Zinc Sulfate	Zincteral	7446-20-0	00-10
Iron Sulfate	Ferrous sulfate	7720-78-7	00-10
Manganese Sulfate		7785-87-7	00-10

### SECTION 4: FIRST AID MEASURES

IF INHALED:	Move to fresh air and keep comfortable, seek medical attention if unwell.
IF ON SKIN:	Wash affected areas with soap and water. Seek medical attention if irritation persists. Wash contaminated clothing before re-use.
IF IN THE EYES:	Immediately flush with water for 15-20 minutes, remove contact lenses if present and easy to do – continue rinsing. Seek medical attention if irritation persists.
IF SWALLOWED:	Rinse mouth. DO NOT INDUCE VOMITING unless directed by a medical professional. Seek medical attention if unwell.
SPECIAL TREATMENT:	None known
HEALTH HAZARDS:	See Section 11

### SECTION 5: FIREFIGHTING MEASURES

EXTINGUISHING MEDIA:	Use media suitable for surrounding fire. No special media required.
SPECIFIC FIRE HAZARDS:	When heated to decomposition, this product will emit toxic oxides, sulfides, and ammonia.
SPECIAL FIREFIGHTING PROCEDURES:	Wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA).

### SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL / RELEASE PROCEDURES:	Contain material and place in containers for use as intended, or discard according to Federal, State and Local regulations.
ENVIRONMENTAL PRECAUTIONS:	Prevent spilled material from entering storm drains or water bodies. If material enters a waterway, notify the appropriate authorities.
PROTECTIVE EQUIPMENT:	Wear PPE according to Section 8

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### SECTION 7: HANDLING AND STORAGE

Wash hands after handling material. Do not eat, drink or smoke while handling the material. Avoid breathing vapors/mists. Not intended for human consumption. Store in a cool, dry, well-ventilated area away from incompatible materials.

### SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

#### EXPOSURE LIMITS:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. Currently, the other constituents have no known exposure limits.

<u>HAZARDOUS COMPONENT</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Ferrous Sulfate		1 mg/m <sup>3</sup> (TWA) 1 mg/m <sup>3</sup> (TWA) (NIOSH)
Manganese Compounds	5 mg/m <sup>3</sup> (Ceiling)	0.2mg/m <sup>3</sup> (TWA)

#### PERSONAL PROTECTIVE EQUIPMENT / PROTECTION MEASURES / CONTROLS:

RESPIRATORY PROTECTION:	NIOSH approved respirator, if required
EYE PROTECTION:	Safety glasses with sideshields, goggles, or faceshield
SKIN PROTECTION:	Appropriate for the task. Impervious and compatible with material.
VENTILATION:	Use with adequate ventilation

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR:	Light pink liquid with slight earthy odor
pH:	1.7 – 2.0
MELTING POINT:	Not applicable
BOILING POINT:	Not available
FLASH POINT:	Not flammable
EVAPORATION RATE:	Not available
FLAMMABLE LIMITS:	Not applicable
VAPOR PRESSURE:	Not available
VAPOR DENSITY:	Not available
SPECIFIC GRAVITY:	1.29
SOLUBILITY (IN WATER):	Soluble
PARTITION COEFFICIENT:	Not available
AUTOIGNITION TEMP:	Not available
DECOMPOSITION TEMP:	Not available
ODOR THRESHOLD:	Not available
VISCOSITY:	Not available

### SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Product is stable.
CONDITIONS TO AVOID:	Heat
INCOMPATIBILITY:	Strong acids, bases, and oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS:	Toxic oxides, sulfides, and ammonia

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### SECTION 11: TOXICOLOGICAL INFORMATION

HEALTH EFFECTS: Causes serious eye, skin and respiratory irritation.

CARCINOGENICITY: None of the ingredients are known / listed carcinogens.

#### INGREDIENT TOXICITY RANGES:

ORAL: > 305 mg/kg (manganese sulfate) – 14,300 mg/kg (urea)

DERMAL: > 155 mg/kg (ferrous sulfate)

### SECTION 12: ECOLOGICAL INFORMATION

Very toxic to aquatic life with long-lasting effects. Long term degradation products may arise. Products of degradation are not expected to be hazardous.

### SECTION 13: DISPOSAL CONSIDERATIONS

Use product for intended purpose where possible. Dispose of in accordance with all national, regional / state, and local regulations.

### SECTION 14: TRANSPORT INFORMATION

UN NUMBER: UN3264

PROPER SHIPPING NAME: Corrosive liquid, acidic, inorganic, n.o.s (iron sulfate)

TRANSPORT HAZARD CLASS: 8

PACKING GROUP: III

### SECTION 15: REGULATORY INFORMATION

SARA 311/312: ACUTE, CHRONIC

SARA 313: Manganese Compounds  
Zinc Sulfate

REPORTABLE QUANTITY: Manganese Compounds (No RQ)

RIGHT-TO-KNOW: Manganese Compounds (CA, MA, MN, NJ, PA)  
Manganous Sulfate (CA, MN, NJ, PA)  
Zinc Sulfate (MA, NJ, PA)

CA PROP 65: No requirements

**SECTION 16: OTHER INFORMATION**

NFPA RATINGS:       HEALTH               1  
                          FLAMMABILITY       0  
                          INSTABILITY         0

HMIS RATINGS:       HEALTH               1  
                          FLAMMABILITY       0  
                          INSTABILITY         0

PREPARED BY:        DBA EHS Consulting

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