





Micrel Total (5-0-0)

NFPA	HMIS	WHMIS	TDG	DOT												
	<table border="1"> <tr> <td>Health</td> <td>minor</td> <td>1</td> </tr> <tr> <td>Flammability</td> <td>minimal</td> <td>0</td> </tr> <tr> <td>Physical Hazard</td> <td>minimal</td> <td>0</td> </tr> <tr> <td>Personal Protection</td> <td></td> <td>B</td> </tr> </table>	Health	minor	1	Flammability	minimal	0	Physical Hazard	minimal	0	Personal Protection		B			
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Section 1 - IDENTIFICATION

Product Name:	Micrel Total 5-0-0 with S, Mg, B, Cu, Fe, Mn, Mo, and Zn
Synonyms:	Liquid Micronutrient Solution
Recommended Use / Restrictions:	For crops, trees, ornamentals, turf, hydroponics & soil remediation.
Company:	Growth Products, Ltd. 80 Lafayette Avenue White Plains, NY 10603
Company Phone Number:	800-648-7626
Emergency Phone Number:	800-222-1222 (American Association of Poison Control Centers)

Section 2 – HAZARD(S) IDENTIFICATION

Emergency Overview:	This product is not considered hazardous and does not require labeling.
POTENTIAL HEALTH EFFECTS:	This product may irritate eyes and skin upon prolonged or repeated contact. Over-exposure by inhalation may cause respiratory tract irritation. Do not ingest. Ingestion of large amounts of this substance may produce irritation of the gastro-intestinal tract. May cause local discomfort if skin with cuts is exposed.
SIGNAL WORD:	N/A
HAZARD STATEMENTS:	N/A

Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS

COMPOSITION INFORMATION:

Substance/Mixture: Mixture

<u>CHEMICAL NAME</u>	<u>CAS REGISTRY No</u>	<u>REACH No</u>	<u>EINECS No</u>
Urea:	57-13-6	012119463277-33	200-315-5
Ferrous Sulfate (Heptahydrate):	7782-63-0	-	231-753-5
Magnesium Sulfate anhydrous	7487-88-9	-	231-298-2
Copper Sulfate	7758-99-8	-	231-847-6
Manganese Sulfate	7785-87-7	-	232-089-9
Sodium Borate	1303-96-4	-	215-540-4
Sodium Molybdate	7631-95-0	-	231-551-7
Zinc Sulfate	7446-20-0	-	231-793-3
Citric Acid:	77-92-9	-	201-069-1



Section 4 – FIRST-AID MEASURES

Routes of Exposure:

INHALATION: Not expected to be harmful under normal conditions of use, however if allowed to become airborne, may cause irritation of nose, throat and lungs. If symptoms are experienced remove source of contamination or move victim to fresh air. Obtain medical attention if needed.

INGESTION: Have victim rinse mouth thoroughly with water. **DO NOT INDUCE VOMITING.**

EYE CONTACT: Irritating to eyes. Immediately flush the contaminated eye(s) with cold, gently flowing water for 5 minutes. Remove contact lenses, if applicable and continue flushing for 15 minutes. Rise entire surface of the eye(s) and lids. If irritation persists, seek medical attention.

SKIN CONTACT: No significant effects or critical hazards. If irritation occurs, flush affected skin area with cold water. If irritation persists, seek medical attention.

Section 5 – FIRE-FIGHTING MEASURES

Fire and Explosion Hazards: Non-combustible

Flammable Limits: LEL: N/A, UEL: N/A

Extinguishing Media: Use an extinguishing agent suitable for the surrounding fire.

Fire Fighting Procedures: None

Flashpoint and Method: N/A

Decomposition Products: Carbon dioxide, carbon monoxide, nitrogen oxides

Section 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Stop leak if without risk. Prevent product from entering drinking water supplies. Collect liquid or solidify with absorbent material and package for disposal according to local, state, and federal regulations.

WASTE DISPOSAL PRECEDURES:

Dispose in accordance with state and local regulation.

REPORTABLE QUANTITY UNDER CERCLA: N/A

Section 7 - HANDLING AND STORAGE

STORAGE TEMPERATURE:

MAX 100° F **MIN** 40° F **INDOOR** **OUTDOOR** **REFRIG.**

PRECAUTIONS TO BE TAKEN IN HANDLING:

For safe handling - put on appropriate protective clothing (PPE). Do not ingest. Avoid contact with eyes, skin and clothing. Do not reuse containers. Refrain from eating, drinking and smoking in work areas.

PRECAUTIONS TO BE TAKEN IN STORAGE:

DO NOT FREEZE. Store in a cool, dry well ventilated area. Rotate stock in storage to use oldest first. Store in original containers only. Keep out of reach of children.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

SKIN PROTECTION (Gloves): Gloves

EYE PROTECTION: Use goggles.

PROTECTIVE CLOTHING: Where there is a large scale use of this material with significant potential for worker contact, long-sleeved clothing or coveralls, chemical resistant gloves, and/or safety glasses with side shields may be necessary.

OTHER PROTECTION: N/A

Respiratory Protection or Required Ventilation:

Not normally needed. Where air contaminants can exceed acceptable criteria use NIOSH/MSHA approved respiratory protection equipment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid	Evaporation Rate:	Same as Water
Color:	Brown/Green	Boiling Point:	About 210° F / 99° C
Odor:	Slight Musty Odor	Freezing Point:	>32°F / 0° C
Weight Per Gallon / Liter:	11.5# @ 70° F / 1.37 Kg @ 21° C	Viscosity:	1-15 cps @ 21 Degrees C
Storage Life at 70F:	>1 year	Flash Point/Method:	Noncombustible
pH – 21C:	3.5	Vapor Pressure:	N/A
Solubility:	Completely Miscible	Storage Temperature:	Above 40° F / 4° C

Section 10 – STABILITY AND REACTIVITY

CHEMICAL STABILITY:	Stable.
CONDITIONS TO AVOID:	Avoid contact with unfinished wood, painted surfaces, masonry or concrete surfaces as this product may cause staining
INCOMPATIBLE MATERIALS:	N/A (None known)
HAZARDOUS DECOMPOSITION PRODUCTS:	CO, CO ₂ , NH ₃ , Aldehydes, particulate matter and other organic compounds.
HAZARDOUS POLMERIZATION:	Material is not know to polymerize. Will not occur.

Section 11 – TOXICOLOGICAL INFORMATION

EFFECT OF OVEREXPOSURE ACUTE (SHORT TERM EXPOSURE):	Liquid contact may cause slight eye irritation and repeated skin exposure may cause some skin irritation.
CHORONIC (LONG TERM EXPOSURE):	None Known
EXPOSURE ROUTES:	Not expected to be harmful under normal conditions of use, however if allowed to become airborne, may cause irritation of nose, throat and lungs May cause irritation on prolonged or repeated contact
Hazard:	
ACUTE TOXICITY (LETHAL DOSES):	
DERMAL LD₅₀ :	0.5 ml dose level for rabbits
ORAL LD₅₀ :	5000 mg/kg dosage level for rats
ACUTE TOXICITY (IRRITATION, SENSITIZATION):	
EFFECTS TO EYES:	No corneal or iridal effects were noted at a dose of 0.1 ml for rabbits.
EFFECTS TO INGESTION:	Non-toxic or pathogenic
EFFECTS TO SKIN:	Moderate irritation, reversible within 7 days
CARCINOGENICITY DATE:	N/E

Section 12 – ECOLOGICAL INFORMATION

TOXICITY:	This material is not classified as hazardous. Use according to good working practices.
ECOTOXICITY:	N/E
MOBILITY IN SOIL:	This product is biodegradable is soil by microbial activity.
OTHER ADVERSE EFFECTS:	N/E. None known.

Section 13 – DISPOSAL CONSIDERATIONS
WASTE DISPOSAL:

Waste should be avoided or minimized wherever possible. Empty containers may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14 – TRANSPORT INFORMATION**DOT UN STATUS:** This material is not regulated hazardous material for transportation.**Section 15 – REGULATORY INFORMATION**

N/E

Section 16 – OTHER INFORMATION**Revised Date: 9 February 2016****OTHER PRECAUTIONS:** Read entire label before using.

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ABBREVIATIONS / ACRONYMS:

N/E – Not Established

N/A – Not Applicable

NFPA – National Fire Protection Association

HMIS – Hazardous Materials Identification System

WHMIS – Workplace Hazardous Materials Information System

TDG – Transport of Dangerous Goods

DOT – Department of Transportation

NIOSH – National Institute of Occupational Safety & Health

RELs – Recommended Exposure Limits

HMIS Letter: B**Equipment:**