

## *Iron Max AC 6% 15-0-0 with 2% Chelated Mn & 3.5% S*

### Section 1 -- IDENTIFICATION

#### 1.1. Product Identifier

**Product name:**

**Iron Max AC 6% 15-0-0**

**Synonym:**

Chelated liquid iron and manganese fertilizer solution with sulfur

#### 1.2. Recommended Use / Restrictions

**Identified Uses:**

For turf, ornamentals, trees, crops, hydroponics & soil remediation

**Restrictions:**

N/A

#### 1.3. Supplier Details

**Company:**

Growth Products, Ltd.  
80 Lafayette Avenue  
White Plains, NY 10603-1603 USA  
+011 914-428-1316 (9 am - 5 pm EST Mon - Fri)  
questions@growthproducts.com

#### 1.4. Emergency Telephone Number

**Emergency Telephone:**

800-222-1222 (American Association of Poison Control Centers)

### Section 2 -- HAZARD(S) IDENTIFICATION

#### 2.1. Classification of substance or mixture

**Target Organs:**

Eyes, Skin

**Physical Hazards:**

Not Classified

**Health Hazards:**

Acute Tox., Oral 4 - H303

Skin Irrit. 2 - H316

Eye Irrit. 2B - H320

**Environmental Hazards:**

Not Classified

#### 2.2. Label Elements

**Pictogram:**



**Signal Word:**

WARNING!

**Hazard Statements:**

H303 May be harmful if swallowed

H316 Causes mild skin irritation

H320 Causes eye irritation

**Precautionary Statements:**

P264 Wash hands/face/exposed skin thoroughly after handling

P270 Do not eat, drink or smoke when using this product

P271 Use only outdoors or in a well-ventilated area

P280 Wear protective gloves/eye and face protection

P301+P312+P330 IF SWALLOWED: Call a Poison Center/doctor if you feel unwell. Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## Precautionary Statements continued...

P332+P313 If skin irritation or rash occurs: Get medical advice/attention  
P337+P313 If eye irritation persists: Get medical advice/attention  
P362+P364 Take off contaminated clothing and wash it before reuse  
P403+P233+P405 Store in a well-ventilated place. Keep container tightly closed. Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

## 2.3. Other Hazards

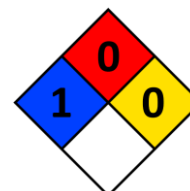
This product does not contain any substance classified as PBT or vPvB

### NFPA Ratings

Health:	1	Slightly hazardous
Flammability:	0	Will not burn
Reactivity:	0	Stable
Specific Hazard:	N/A	Not applicable

### HMIS Ratings

Health:	0	Minor hazard
Flammability:	0	Minimal hazard
Reactivity:	0	Minimal hazard
Personal (PPE):	C	Goggles, Gloves, Protective Apron



Health	minor	1
Flammability	minimal	0
Physical Hazard	minimal	0
Personal Protection		C

## Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

Chemical Name	CAS Registry No.	REACH No.	ENECS No.	Classification
Urea:	57-13-6	-	-	<u>GHS-US</u> Skin Irrit. 2 H315 Eye Irrit. 2B- H320 STOT SE 3 H335
Ferrous sulfate (Heptahydrate):	7782-63-0	-	-	<u>GHS-OHSA</u> Acute Tox., Oral 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319
Biuret:	108-19-0	-	-	<u>GHS-US</u> Skin Irrit. 2 H315 Eye Irrit. 2A H319
Manganese sulfate:	10034-96-5	-	-	<u>GHS-US</u> STOT RE 2 H373 Aquatic Tox., Chronic 2 H411
Citric acid:	77-92-9	-	201-069-1	<u>GHS-EC</u> Eye Irrit. 2A - H319

## Section 4 -- FIRST-AID MEASURES

### 4.1. Description of first-aid measures

#### Inhalation:

Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if symptoms are severe or persist.

#### Ingestion:

Never give anything by mouth to an unconscious person. Do not induce vomiting, unless instructed by a healthcare professional. Rinse mouth thoroughly with water. Get medical attention if any symptoms develop.

<b>Skin Contact:</b>	Remove affected person from source of contamination. Take off immediately all contaminated clothing and wash it before reuse. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
<b>Eye Contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.
<b>4.2. Most important symptoms and effect, both acute and delayed</b>	
<b>Inhalation:</b>	May cause respiratory irritation. There may be irritation of the throat with a feeling of tightness in the chest.
<b>Ingestion:</b>	Ingestion may cause nausea, vomiting and stomach and digestive irritation. There may be soreness and redness of the mouth and throat.
<b>Skin Contact:</b>	Skin contact may cause redness and irritation. Prolonged or repeated skin contact can result in the development of allergy-like skin reactions (e.g., dermatitis, rashes)
<b>Eye Contact:</b>	There may be irritation and redness. Profuse watering of the eyes.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	
<b>Notes for doctor:</b>	No specific recommendations. If in doubt, get medical attention promptly. Treatment may vary with the condition of victim and specifics of incident.
<b>Specific treatments:</b>	Eye bathing equipment should be available on the premises.

## Section 5 -- FIREFIGHTING MEASURES

<b>5.1. Extinguishing media</b>	
<b>Suitable extinguishing media:</b>	The product is not flammable. Use fire-extinguishing media suitable for the surrounding environment. The substance itself does not burn.
<b>Unsuitable extinguishing media:</b>	N/A
<b>Environmental Hazards:</b>	
<b>5.2. Special hazards arising from the substance or mixture</b>	
<b>Hazardous combustion products:</b>	N/A
<b>5.3. Advice for firefighters</b>	
<b>Protective actions during firefighting:</b>	No specific firefighting precautions known. Irritant, non-flammable, water soluble, upon contact with water pressure generates foam. Do not inhale gases created by fire. Do not allow run-off from firefighting to enter drains or watercourses.
<b>Special protective equipment for firefighters:</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) eye protection and appropriate protective clothing.

## Section 6 -- ACCIDENTAL RELEASE MEASURES

<b>6.1. Personal precautions, protective equipment and emergency procedures</b>	
<b>Personal precautions:</b>	Wear protective clothing as described in Section 8 of this safety data sheet.
<b>6.2. Environmental precautions</b>	
<b>Environmental precautions:</b>	Avoid the spillage or runoff entering drains, sewers or watercourses.

## 6.3 Methods and material for containment and cleanup

### Methods for cleaning up:

Stop leak if possible without risk. Contain and absorb spillage with sand, earth or other noncombustible material. Transfer to a container for disposal. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

## 6.4 Reference to other sections

### Reference to other sections:

For personal protection, see Section 8. For waste disposal, see Section 13.

## Section 7 -- HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

#### Using precautions:

Provide adequate ventilation. Avoid spilling. Avoid contact with skin and eyes. Wash hands thoroughly after handling.

#### Advice on general occupational hygiene:

Do not eat, drink or smoke when using this product. Remove contaminated clothing and protective equipment before entering eating areas.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

#### Storage precautions:

Store in tightly closed original container in a dry, cool and well-ventilated place. Store at temperatures above 5°C. Keep away from heat and direct sunlight. Keep away from food, drink and animal feeding stuffs.

### 7.3. Specific end use(s)

#### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Control Parameters

#### Occupational exposure limits

Material	Type	Value	Source
Urea (CAS 57-13-6):	ACGIH-TWA OSHA-PEL	10 mg/m <sup>3</sup> , inhalation particulate 5 mg/m <sup>3</sup> , respirable particulate	USA-ACGIH
Ferrous sulfate (CAS 7782-63-0):	TWA	1 mg/m <sup>3</sup> TLV	USA-ACGIH USA OSHA TABLE Z USA-NIOSH
Biuret (CAS 108-19-0):	N/A	N/A	N/A
Manganese sulfate (CAS 10034-96-5):	USA-ACGIH USA-OSHA	0.2 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> , ceiling limit value	USA-ACGIH USA-ACGIH
Citric acid (CAS 77-92-9):	OSHA-PEL	<10 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup>	OSHA

### 8.2. Exposure controls

#### Protective equipment

##### General information:

Protective engineering solutions should be implemented and in use before personal protective equipment is considered.

##### Appropriate engineering controls:

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.

##### Eye / face protection:

Use chemical splash-type goggles. Face shield.

<b>Hand protection:</b>	For hand protection, wear approved gloves made of nitrile, PVC, or neoprene. Thoroughly rinse the outside of gloves with water prior to removal. Inspect regularly for leaks.
<b>Other skin and body protection:</b>	For body protection wear suitable protective clothing.
<b>Hygiene measures:</b>	Avoid breathing vapors, mist or gas. Clean water should be available for washing in case of eye or skin contamination.
<b>Respiratory protection:</b>	If concentrations in excess of 10 ppm are expected, use NIOSH/DHHS approved self-contained breathing apparatus (SCBA) or other approved air-supplied respirator (ASR) equipment (e.g., a full-face airline respirator (ALR)).
<b>Environmental exposure controls:</b>	Eye bathing equipment should be available on the premises. Provide quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

**Equipment:**

**HMIS Letter:**

**C**



## Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<b>Physical State:</b>	Liquid	<b>Evaporation Rate:</b>	Same as water
<b>Color</b>	Brown/Green	<b>Boiling Point:</b>	About 210°F / 99°C
<b>Odor:</b>	Slightly Musty Odor	<b>Freezing Point:</b>	>32°F / 0°C
<b>Weight per Gallon / Liter:</b>	11.5# @ 70°F / 1.38 Kg @ 21°C	<b>Viscosity:</b>	1-15 cps @ 21 Degrees C
<b>Storage Life at 70F:</b>	>1 year	<b>Flash Point/Method:</b>	Noncombustible
<b>pH – 21C:</b>	1-2	<b>Vapor Pressure:</b>	Equivalent to water
<b>Solubility:</b>	Completely Miscible	<b>Storage Temperature:</b>	Above 40°F / 4°C

## Section 10 -- STABILITY AND REACTIVITY

### 10.1. Reactivity

**Reactivity:** Stable

### 10.2. Chemical Stability

**Stability:** Stable under normal recommended storage conditions.

### 10.3. Possibility of Hazardous Reactions

**Possibility of hazardous reactions:** N/E

### 10.4 Conditions to Avoid

**Conditions to avoid:** Exposure to extreme temperatures and incompatible materials. Contact with unfinished wood, painted surfaces, masonry or concrete surfaces as this product may cause staining.

### 10.5 Incompatible Materials

**Materials to avoid:** N/E

### 10.6 Hazardous Decomposition Products

**Hazardous decomposition products:** CO, CO<sub>2</sub>, NH<sub>3</sub>, Aldehydes, particulate matter & other organic compounds.

**Section 11 -- TOXICOLOGICAL INFORMATION****11.1. Information on Toxicological Effects**

<b>Toxicological effects:</b>	N/E. No data available.
<b>Over Exposure, Acute:</b>	Liquid contact may cause slight eye irritation and repeated skin exposure may cause skin irritation.
<b>Over Exposure, Chronic:</b>	N/E
<b>Routes of Exposure:</b>	Not expected to be harmful under normal conditions of use, however if allowed to become airborne, may cause irritation of the nose, throat and lungs. May cause irritation on prolonged or repeated contact.
<b>Acute, Dermal LD<sub>50</sub>:</b>	0.5 ml dose level, rabbits
<b>Acute, Oral LD<sub>50</sub>:</b>	5000 mg/kg dosage level, rats
<b>Effects to eyes:</b>	No corneal or iridal effects were noted at dose of 0.1 ml. rabbits.
<b>Effects to Ingestion</b>	Non-toxic and non-pathogenic
<b>Effects to skin:</b>	Moderate irritation, reversible within 7 days
<b>Carcinogenicity Date:</b>	N/E

**11.2 Toxological information on main components of the mixture:**

N/E. No data available.

**Section 12 -- ECOLOGICAL INFORMATION****Ecotoxicity:****12.1. Toxicity**

This material is not classified as hazardous. Use according to good working practices.

**12.2. Persistence and degradability****Persistence and Degradability:**

N/E

**12.3. Bioaccumulative potential****Bioaccumulative potential:**

Expected to desorb fairly rapidly from soil and not bioaccumulate.

**Partition coefficient:****12.4. Mobility in Soil****Mobility:**

This product is biodegradable in soil by microbial activity.

**12.5. Results of PBT and vPvB Assessment**

Not listed in EIS PBT List.

**12.6. Other Adverse Effects****Other adverse effects:**

N/E

**Section 13 -- DISPOSAL CONSIDERATIONS****13.1. Waste Treatment Methods****Disposal methods:**

Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product, residue and/or container.

The information offered in Section 13 is for the product as shipped.

**Section 14 -- TRANSPORTATION INFORMATION****General**

Product is not flammable, not corrosive, not explosive and not radioactive.

**14.1. UN Number**

N/A

**14.2. UN Proper Shipping Name**

N/A

**14.3. Transport Hazard Class(es)**

N/A

**14.4. Packing Group**

N/A

**14.5. Environmental Hazards**

N/A

**14.6. Special Precautions for User****14.7. Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code**

N/A

**Section 15 -- REGULATORY INFORMATION****15.1. Safety, health and Environmental Regulations / Legislation Specific for the Substance or Mixture****EU legislation:**

This product is labeled in accordance EU directives. The Dangerous Substance Directive (Directive (67/548/EEC, "DSD"), The Dangerous Preparations Directive (Directive 1999/45/EC, "DPD") and the new regulations classification, labeling and packaging of substances and mixtures, Regulation (EC) No 1272/2008 of the European Parliament and the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EU) No 453/2010 of May 2010. USA-FDA Title 21 CFR 172.510.

**15.2. Chemical Safety Assessment**

See Section 2.3 for NFPA & HMIS Ratings

**REVISED DATE: 16 May 2016****Other Precautions:****Abbreviations / Acronyms:****Read entire label before using**

N/E	Not Established	N/A	Not applicable
ACGIH	American Conference of Governmental Industrial Hygienists		
TLV	Threshold Limit Values		
PEL	Permissible Exposure Limit		
REL	Recommended Exposure Limit		
OSHA	Occupational Safety and Health Administration		
NIOSH	National Institute for Occupational Safety and Health		
TWA	Time Weighted Average over 8 hours of work		
TLV	Threshold Limit Value over 8 hours of work		
REL	Recommended Exposure Limit		
PEL	Permissible Exposure Limit		
STEL	Short Term Exposure Limit during x minutes		
IDLH	Immediately Dangerous to Life or Health		
TSCA	Toxic substance Control Act (United States)		
DSL	Domestic Substance List (Canada)		
EINECS	European Inventory of Existing Commercial Chemical Substances (Europe)		
ELINCS	European List of Notified Chemical Substances (Europe)		
ENCS	Existing Chemical Substances		
IECSC	Inventory of Existing Chemical Substances		
KECL	Korea Existing Chemicals Inventory		
PICCS	Philippines Inventory of Chemical and Chemical Substances		
AICS	Australian Inventory of Chemical Substances		
NZIoC	New Zealand Inventory of Chemicals		
HMIS	Hazardous Material Identification System (American Coatings Association)		
NFPA	National Fire Protection Association		
PBT	Persistent Bioaccumulative and Toxic		
vPvB	Very Persistent and very Bioaccumulative		
STOT SE	Specific Target Organ Toxicity; Single Exposure		
STOT RE	Specific Target Organ Toxicity; Repeated Exposure		

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