

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
 Product name : 4-0-0 with UMAXX  
 Product code : 00078

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.3. Details of the supplier of the safety data sheet

Harrell's  
 720 Kraft Rd.  
 Lakeland, FL, 33815  
 T 1-863-680-2003  
[www.harrells.com](http://www.harrells.com)

#### 1.4. Emergency telephone number

Emergency number : 1-800-424-9300  
 ChemTrec

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Skin Irrit. 2 H315  
 Aquatic Acute 3 H402

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning  
 Hazard statements (GHS-US) : H315 - Causes skin irritation  
 H402 - Harmful to aquatic life  
 Precautionary statements (GHS-US) : P264 - Wash ... thoroughly after handling  
 P273 - Avoid release to the environment  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
 P321 - Specific treatment (see ... on this label)  
 P332+P313 - If skin irritation occurs: Get medical advice/attention  
 P362 - Take off contaminated clothing and wash before reuse  
 P501 - Dispose of contents/container to ...

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS-US)

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable  
 Full text of H-phrases: see section 16

#### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
------	--------------------	---	-----------------------

# 4-0-0 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

iron(II) sulfate, heptahydrate	(CAS No)7782-63-0	1 - 10	Acute Tox. 4 (Oral), H302 Aquatic Acute 2, H401
citric acid	(CAS No)77-92-9	1 - 10	Aquatic Acute 3, H402
ammonium nitrate,conc combustible substances<0,2%	(CAS No)6484-52-2	1 - 10	Aquatic Acute 3, H402

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Causes severe skin burns and eye damage.
-------------------	--

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Reactivity	: Thermal decomposition generates : Corrosive vapours.
------------	--

#### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
----------------------	-----------------------------------

##### 6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
-------------------------	--

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact during pregnancy/while nursing.
Hygiene measures	: Wash ... thoroughly after handling.

# 4-0-0 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight.
Storage temperature	: $\geq 25$ (5 - 42) °C

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### iron(II) sulfate, heptahydrate (7782-63-0)

USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
-----------	--------------------------------	---------------------

### 8.2. Exposure controls

Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or face shield.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear appropriate mask.
Other information	: Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: brown.
Odour	: Characteristic odour.
Odour threshold	: No data available
pH	: $\leq 2$
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: $\leq 0$ °C
Boiling point	: $\geq 100$ °C
Flash point	: None
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: $\geq 1.24$ g/ml
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

VOC content	: $\leq 10$ g/l
-------------	-----------------

# 4-0-0 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

#### 10.2. Chemical stability

Not established.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>iron(II) sulfate, heptahydrate (7782-63-0)</b>	
LD50 oral rat	1480 mg/kg (Rat)
<b>citric acid (77-92-9)</b>	
LD50 oral rat	3000 mg/kg (Rat)
<b>ammonium nitrate,conc combustible substances&lt;0,2% (6484-52-2)</b>	
LD50 oral rat	4820 mg/kg (Rat)
LD50 dermal rabbit	> 3000 mg/kg (Rabbit)

Skin corrosion/irritation : Causes skin irritation.  
pH: <= 2

Serious eye damage/irritation : Not classified  
pH: <= 2

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - water : Harmful to aquatic life.

<b>iron(II) sulfate, heptahydrate (7782-63-0)</b>	
LC50 fishes 1	925 mg/l (96 h; Poecilia reticulata)
EC50 Daphnia 1	7.2 mg/l (48 h; Daphnia magna; Metal ion)
LC50 fish 2	> 200 mg/l (48 h; Leuciscus idus)
EC50 Daphnia 2	152 mg/l (48 h; Daphnia magna; Anhydrous form)
<b>citric acid (77-92-9)</b>	

# 4-0-0 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

LC50 fishes 1	2600 mg/l (48 h; Leuciscus idus; pH = 7)
EC50 Daphnia 1	120 mg/l (72 h; Daphnia magna; pH < 7)
LC50 fish 2	1516 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 2	85 mg/l (Daphnia magna)
Threshold limit algae 1	80 mg/l (192 h; Microcystis aeruginosa; Reproduction)
Threshold limit algae 2	640 mg/l (168 h; Scenedesmus quadricauda)

### ammonium nitrate,conc combustible substances<0,2% (6484-52-2)

LC50 fishes 1	74 mg/l (48 h; Cyprinus carpio; Lethal)
EC50 Daphnia 1	555 mg/l (Daphnia magna)
LC50 fish 2	800 mg/l (3.9 h; Pisces)
TLM fish 1	100 - 1000,96 h; Pisces
TLM other aquatic organisms 1	100 - 1000,96 h
Threshold limit algae 1	83 mg/l (Scenedesmus quadricauda; Growth rate)

### 12.2. Persistence and degradability

#### 4-0-0 with UMAXX

Persistence and degradability	Not established.
-------------------------------	------------------

#### iron(II) sulfate, heptahydrate (7782-63-0)

Persistence and degradability	Biodegradability in water: no data available. Biodegradability in soil: no data available. Adsorbs into the soil.
-------------------------------	---

#### citric acid (77-92-9)

Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.420 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.728 g O <sub>2</sub> /g substance
ThOD	0.686 g O <sub>2</sub> /g substance
BOD (% of ThOD)	(20 day(s)) 0.89

### ammonium nitrate,conc combustible substances<0,2% (6484-52-2)

Persistence and degradability	Biodegradable in water. Biodegradable in the soil.
-------------------------------	--

### 12.3. Bioaccumulative potential

#### 4-0-0 with UMAXX

Bioaccumulative potential	Not established.
---------------------------	------------------

#### iron(II) sulfate, heptahydrate (7782-63-0)

Bioaccumulative potential	Not bioaccumulative.
---------------------------	----------------------

#### citric acid (77-92-9)

Log Pow	-1.72 (Experimental value)
Bioaccumulative potential	Bioaccumulation: not applicable.

### ammonium nitrate,conc combustible substances<0,2% (6484-52-2)

Log Pow	-3.1
Bioaccumulative potential	Bioaccumulation: not applicable.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to ...

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

# 4-0-0 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Additional information

Other information : No supplementary information available.

### ADR

Transport document description :

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### iron(II) sulfate, heptahydrate (7782-63-0)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1000 lb
--	---------

#### citric acid (77-92-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

#### 15.2.2. National regulations

No additional information available

### 15.3. US State regulations

#### iron(II) sulfate, heptahydrate (7782-63-0)

U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 2	Hazardous to the aquatic environment — AcuteHazard, Category 2
Aquatic Acute 3	Hazardous to the aquatic environment — AcuteHazard, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed
H315	Causes skin irritation
H401	Toxic to aquatic life

# 4-0-0 with UMAXX

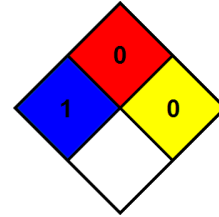
## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

H402

Harmful to aquatic life

- NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
- NFPA fire hazard : 0 - Materials that will not burn.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
- NFPA specific hazard : None



### HMIS III Rating

- Health : 1 Slight Hazard - Irritation or minor reversible injury possible
- Flammability : 0 Minimal Hazard
- Physical : 0 Minimal Hazard
- Personal Protection : C

SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*