

## Safety Data Sheet



### Section 1: Identification

#### Product identifier

**Product Name** • Manga Fix

**Relevant identified uses of the substance or mixture and uses advised against**

**Recommended use** • Soil nutrient

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

**Manufacturer** • Source to Source, a TAP Family Company  
3233 South "I" Street  
Tulare, CA 93274  
United States

**Telephone (General)** • 559-686-4425

**Telephone (General)** • 866-727-4572 - Toll Free

#### Emergency telephone number

**Manufacturer** • 1-800-424-9300 - CHEMTREC - U.S. Canada, Puerto Rico - 24 Hrs.

### Section 2: Hazard Identification

#### United States (US)

According to OSHA 29 CFR 1910.1200 HCS

#### Classification of the substance or mixture

**OSHA HCS 2012** • Specific Target Organ Toxicity Repeated Exposure 2 - H373

#### Label elements

**OSHA HCS 2012**

#### WARNING



**Hazard statements** • May cause damage to organs through prolonged or repeated exposure. - H373

#### Precautionary statements

**Prevention** • Do not breathe mists, vapours, and/or spray. - P260

**Response** • Get medical advice/attention if you feel unwell. - P314

**Storage/Disposal** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

#### Other hazards

**OSHA HCS 2012** • Under United States Regulations (29 CFR 1910.1200 - Hazard Communication

Standard), this product is considered hazardous.

### Section 3 - Composition/Information on Ingredients

#### Substances

- Material does not meet the criteria of a substance.

#### Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Manganese sulfate monohydrate	CAS:10034-96-5	27.34%	NDA	OSHA HCS 2012: STOT RE 2	NDA
Natural humic and organic acids	NDA	11.42%	NDA	OSHA HCS 2012: Not Classified	NDA
Citric acid	CAS:77-92-9	4.5376% TO 5.56%	Ingestion/Oral-Rat LD50 • 3 g/kg	OSHA HCS 2012: Eye Irrit. 2; Skin Irrit. 2; STOT SE 3: Resp. Irrit.	NDA

### Section 4: First-Aid Measures

#### Description of first aid measures

- Inhalation** • Move victim to fresh air. If breathing is difficult, give oxygen. Give artificial respiration if victim is not breathing.
- Skin** • If on skin: Wash with plenty of water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.
- Eye** • IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Ingestion** • If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Get medical attention.

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

- Refer to Section 11 - Toxicological Information.

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

- Notes to Physician** • All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

### Section 5: Fire-Fighting Measures

#### Extinguishing media

- Suitable Extinguishing Media** • In case of fire use media as appropriate for surrounding fire.

- Unsuitable Extinguishing Media** • No data available

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

- Unusual Fire and Explosion Hazards** • No data available

**Hazardous Combustion Products** • No data available

### Advice for firefighters

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.  
Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

## Section 6 - Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions** • Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact.

**Emergency Procedures** • As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep out of low areas. Keep unauthorized personnel away. Stay upwind. Ventilate closed spaces before entering.

### Environmental precautions

- Do not contaminate any watercourse or other body of water by direct application, disposal, or cleaning of equipment.

### Methods and material for containment and cleaning up

**Containment/Clean-up Measures** • Stop leak if you can do it without risk.  
SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.  
LARGE SPILLS: Dike far ahead of spill for later disposal.

## Section 7 - Handling and Storage

### Precautions for safe handling

**Handling** • Use only with adequate ventilation. Do not breathe (dust, vapor or spray mist) Avoid contact with skin, eyes, and clothing.

### Conditions for safe storage, including any incompatibilities

**Storage** • Keep container closed when not in use. Store in a cool, dry, well-ventilated place.

## Section 8 - Exposure Controls/Personal Protection

### Control parameters

Exposure Limits/Guidelines			
	Result	NIOSH	OSHA
Manganese sulfate monohydrate as Manganese compounds	Ceilings	Not established	5 mg/m <sup>3</sup> Ceiling (as Mn) <i>as Manganese compounds</i>
	STELs	3 mg/m <sup>3</sup> STEL (as Mn) <i>as Manganese compounds</i>	Not established
	TWAs	1 mg/m <sup>3</sup> TWA (as Mn) <i>as Manganese compounds</i>	Not established

### Exposure controls

**Engineering Measures/Controls** • Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

## Personal Protective Equipment

- Respiratory** • Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.
- Eye/Face** • Wear safety goggles.
- Skin/Body** • Wear appropriate gloves.
- Environmental Exposure Controls** • Follow best practice for site management and disposal of waste.

## Section 9 - Physical and Chemical Properties

### Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Translucent liquid, no odor.
Color	Translucent	Odor	No odor.
Odor Threshold	No data available		
General Properties			
Boiling Point	No data available	Melting Point	No data available
Decomposition Temperature	No data available	pH	3.06
Specific Gravity/Relative Density	1.26 Water=1	Water Solubility	Soluble 100 %
Viscosity	No data available		
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	No data available	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

## Section 10: Stability and Reactivity

### Reactivity

- No dangerous reaction known under conditions of normal use.

### Chemical stability

- Stable under normal temperatures and pressures.

### Possibility of hazardous reactions

- Hazardous polymerization will not occur.

### Conditions to avoid

- Excess heat.

### Incompatible materials

- Strong oxidizers.

### Hazardous decomposition products

- Ammonia, Oxides of Nitrogen and Oxides of Carbon.

## Section 11 - Toxicological Information

### Information on toxicological effects

Components

Manganese sulfate monohydrate (27.34%)	10034-96-5	<b>Multi-dose Toxicity:</b> Inhalation-Rat TLo • 0.1 mg/m <sup>3</sup> 90 Day(s)-Intermittent; <i>Brain and Coverings:</i> <b>Changes in brain-weight;</b> <b>Mutagen:</b> Micronucleus test • Ingestion/Oral-Mouse • 205 mg/kg 24 Hour(s)-Continuous; <b>Reproductive:</b> Ingestion/Oral-Mouse TLo • 513 mg/kg (5D male); <i>Reproductive Effects:</i> <b>Paternal Effects:Spermatogenesis;</b> <b>Tumorigen / Carcinogen:</b> Ingestion/Oral-Mouse TLo • 1314 g/kg 2 Year(s)-Continuous; <i>Tumorigenic:</i> <b>Equivocal tumorigenic agent by RTECS criteria;</b> <i>Endocrine:</i> <b>Thyroid tumors</b>
Citric acid (4.5376% TO 5.56%)	77-92-9	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 11700 mg/kg; <i>Behavioral:</i> <b>Ataxia;</b> <i>Cardiac:</i> <b>Change in rate;</b> <i>Lungs, Thorax, or Respiration:</i> <b>Respiratory depression;</b> Inhalation-Rat TLo • 180 mg/m <sup>3</sup> ; <i>Lungs, Thorax, or Respiration:</i> <b>Other changes;</b> <i>Liver:</i> <b>Liver function tests impaired;</b> <i>Biochemical:</i> <b>Enzyme inhibition, induction, or change in blood or tissue levels:Dehydrogenases;</b> <b>Irritation:</b> Eye-Rabbit • 750 µg 24 Hour(s) • Severe irritation; Skin-Rabbit • 0.5 mL • Moderate irritation

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012•Data lacking
Aspiration Hazard	OSHA HCS 2012•Data lacking
Carcinogenicity	OSHA HCS 2012•Data lacking
Germ Cell Mutagenicity	OSHA HCS 2012•Data lacking
Skin corrosion/Irritation	OSHA HCS 2012•Data lacking
Skin sensitization	OSHA HCS 2012•Data lacking
STOT-RE	OSHA HCS 2012•Specific Target Organ Toxicity Repeated Exposure 2
STOT-SE	OSHA HCS 2012•Data lacking
Toxicity for Reproduction	OSHA HCS 2012•Data lacking
Respiratory sensitization	OSHA HCS 2012•Data lacking
Serious eye damage/Irritation	OSHA HCS 2012•Data lacking

## Potential Health Effects

### Inhalation

**Acute (Immediate)** • No health effects expected however material does contain a component that may cause respiratory irritation.

**Chronic (Delayed)** • No data available

### Skin

**Acute (Immediate)** • May cause irritation.

**Chronic (Delayed)** • No data available

### Eye

**Acute (Immediate)** • May cause irritation.

**Chronic (Delayed)** • No data available

### Ingestion

**Acute (Immediate)** • May cause irritation if swallowed.

**Chronic (Delayed)** • No data available

### Other

**Chronic (Delayed)** • May cause damage to organs through prolonged or repeated exposure.

Key to abbreviations

LD = Lethal Dose  
 TC = Toxic Concentration  
 TD = Toxic Dose

## Section 12 - Ecological Information

### Toxicity

- Material data lacking.

### Persistence and degradability

- Material data lacking.

### Bioaccumulative potential

- Material data lacking.

### Mobility in Soil

- Material data lacking.

### Other adverse effects

- No studies have been found.

## Section 13 - Disposal Considerations

### Waste treatment methods

**Product waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Packaging waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA

**Special precautions for user**

- None specified.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** • No data available

## Section 15 - Regulatory Information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### SARA Hazard Classifications

- Chronic

State Right To Know				
Component	CAS	MA	NJ	PA
Citric acid	77-92-9	No	No	No
Manganese sulfate monohydrate	10034-96-5	No	No	No
Water	7732-18-5	No	No	No

Inventory		
Component	CAS	TSCA
Citric acid	77-92-9	Yes

Manganese sulfate monohydrate	10034-96-5	No
Water	7732-18-5	Yes

## Section 16 - Other Information

**Last Revision Date**      • 20/October/2014

**Preparation Date**      • 20/October/2014

**Disclaimer/Statement of Liability**      • Reasonable care has been taken in the preparation of this information, but the supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Safety Data Sheet before handling product.

**Key to abbreviations**

NDA = No Data Available

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