



# Qmin™ Zn-Mn

## Safety Data Sheet

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

Revision date: 10/26/2017

Supersedes: 10/27/2015

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

#### 1.1. Product Identifier

Product name : Qmin™ Zn-Mn  
Product code : 7334  
Product form : Substance

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

Intended use : Plant Nutritional Supplement  
Uses advised against : None identified

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

QualiTech, Inc. Phone: 1-800-328-5870  
318 Lake Hazeltine Drive Web: qualitechco.com  
Chaska, MN 55318

#### 1.4. Emergency telephone number

Emergency number : Infotrac (800) 535-5053

### SECTION 2: Hazards identification

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

##### GHS-US classification

Skin Irritant 2 H315  
Eye Irritant 2 H319

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) : None Indicated  
Hazard statement (GHS-US) : H315 Causes skin irritation  
H319 Causes serious eye irritation

Signal word (GHS-US) : **Warning**

Precautionary statements (GHS-US) : P101 If medical advice is needed, have product container or label at hand  
P102 Keep out of reach of children  
P103 Read label before use  
P261 Avoid breathing dust/fume/ gas/mist/vapours/spray  
P264 Wash skin thoroughly after handling  
P280 Wear protective gloves/protective clothing/eye protection/face  
P302+P352 IF ON SKIN: Wash with plenty of soap and water  
  
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P312 IF IN EYES: Rinse cautiously with water for several minutes. Remove Call a POISON CENTER/doctor/physician if you feel unwell

### 2.3. Other Hazards

Other hazards not contributing to the classification : None under normal conditions

2.4. Unknown acute toxicity (GHS-US) : No data available.

## SECTION 3: Composition/information on ingredients

### 3.1. Mixture

### 3.2. Substance

Name	CAS #	%
Zinc	7440-66-6	5-10
Manganese	7439-96-5	<5
Citric Acid	77-92-9	<5
Nitric Acid	7697-37-2	<5

Specific chemical identity (ies) and/or exact percentage(s) of composition may be withheld as a trade secret.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person

First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. Supply oxygen if necessary

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs, get medical advice/attention

First-aid measures after eye contact : IF IN EYES: Immediately flush with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing. Seek medical care.

First-aid measures after ingestion : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell

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

Symptoms/injuries after inhalation : Not available

Symptoms/injuries after skin contact : Causes skin irritation

Symptoms/injuries after eye contact : Causes eye irritation, may cause significant eye irritation

Symptoms/injuries after ingestion : Causes digestive tract irritation

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

Call physician and Poison Control Center if adverse conditions appear

## SECTION 5: Firefighting measures

### 5.1. Extinguishing Media

Suitable extinguishing media : Any media suitable for surrounding materials

Unsuitable extinguishing media : Does not apply

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

Fire hazard : The product is not flammable

Explosion hazard : No data available

Reactivity : No data available

### 5.3. Advice for firefighters

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

## SECTION 6: Accidental release measures

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

- General measures : Restrict area and proceed with clean up using appropriate protective equipment. Dispose of material in accordance with all applicable municipal, state, and federal regulations

#### 6.1.1 For non-emergency personnel

- Protective equipment : Safety glasses. Gloves. Dust mask
- Emergency procedures : Evacuate unnecessary personnel

#### 6.1.2 For emergency responders

- Protective equipment : Equip clean up crew with proper protection
- Emergency procedures : Rinse area down with water after cleanup.

### 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

- For containment : Use acid compatible boom to contain material
- Methods for cleaning up : Contain spill with acid compatible absorbent material and recover into drums. Rinse spill area with water

### 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
- : Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work

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

- Storage conditions : Keep container tightly closed. Keep container in a cool, dry, well-ventilated area. Keep away from heat and direct sunlight
- Incompatible products : Strong alkali products may react
- Incompatible materials or conditions : No additional information available

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Zinc (7440-66-6)	
NIOSH REL, TWA (mg/m <sup>3</sup> )	Not established
OSHA PEL, TWA (mg/m <sup>3</sup> )	Not established
NIOSH IDLH (mg/m <sup>3</sup> )	Not established

Manganese (7439-96-5)	
NIOSH REL, TWA (mg/m <sup>3</sup> )	1
OSHA PEL, TWA (mg/m <sup>3</sup> )	5
NIOSH IDLH (mg/m <sup>3</sup> )	500

Citric Acid (77-92-9)	
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NIOSH REL, TWA (mg/m <sup>3</sup> )	Not established
OSHA PEL, TWA (mg/m <sup>3</sup> )	Not established
NIOSH IDLH (mg/m <sup>3</sup> )	Not established

<b>Nitric Acid (7697-37-2)</b>	
NIOSH REL, TWA (mg/m <sup>3</sup> )	Not established
OSHA PEL, TWA (mg/m <sup>3</sup> )	Not established
NIOSH IDLH (mg/m <sup>3</sup> )	Not established

## 8.2. Exposure Controls

- Appropriate engineering controls : pH between 2-3, use caution. Emergency eye wash fountain and safety showers should be immediately available
- Personal protective equipment : Avoid physical exposure



- Hand protection : Wear chemically resistant gloves
- Eye protection : Chemical goggles or face shield + safety glasses
- Skin and body protection : Wear suitable protective clothing
- Respiratory protection : Avoid breathing fumes
- Other information : Do not eat, drink, or smoke during use

## SECTION 9: Physical and chemical properties

- Physical state : Liquid
- Appearance : Colored liquid
- Molecular mass : No data available
- Color : Amber to dark brown
- Odor : Slight to none
- Odor Threshold : No data available
- pH : 2.0 - 2.3
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapor pressure : No data available
- Relative vapor density at 20°C : No data available
- Density : No data available
- Solubility : No data available
- 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
- Oxidizing properties : No data available
- Explosive limits : No data available

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity

No data available

### 10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7)

**10.3. Possibility of hazardous reactions**

May react with bases or strong oxidizers

#### 10.4. Conditions to avoid

Contact with bases or strong oxidizers

#### 10.5. Incompatible materials

Strong bases or strong oxidizers

#### 10.6. Hazardous decomposition products

No data available

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

Acute toxicity : Not classified

Zinc (7440-66-6)	No data available
Manganese (7439-96-5)	No data available
Citric Acid (77-92-9)	LC50 fishes 1, 440 mg/l; EC50 Daphnia 1, 1534 mg/l
Nitric Acid (7697-37-2)	LC50 rat, 0.8 mg/l; LC50 fishes (96hrs) 72 mg/l

Skin corrosion/irritation : Skin irritant (Category 2)

Serious eye damage/irritation : Eye irritant (Category 2)

Respirator or skin sensitization : 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

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

Symptoms/injuries after inhalation : No additional information available

Symptoms/injuries after skin contact : Causes skin irritation

Symptoms/injuries after eye contact : Causes eye irritation

Symptoms/injuries after ingestion : Not classified

Likely routes of exposure : Skin and eye contact

Chronic symptoms : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : No data available

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose of product in accordance with all applicable laws and regulations.

Ecology - waste materials : Avoid release to the environment

**SECTION 14: Transport information**

In accordance with DOT

Not a dangerous good in sense of transport regulations (US)

**Additional information**

Other information : No supplementary information available.

**Transport by sea**

No additional information available

**Transport by air**

No additional information available

**SECTION 15: Regulatory information****15.1. US Federal regulations**

Listed on the United States Toxic Substan

TSCA	Does not contain any components with a SARA 302 RQ.
Section 302 (EHS) TPQ	Does not contain any components with a section 304 EHS RQ.
Section 304 (EHS) RQ	Does not contain any components with a CERCLA RQ.
CERCLA RQ	Reporting thresholds not exceeded.
Section 313	No additional information available.

Manganese (7439-96-5)

TSCA	Listed on the United States Toxic Substances Act (TSCA) inventory
Section 302 (EHS) TPQ	Does not contain any components with a SARA 302 RQ.
Section 304 (EHS) RQ	Does not contain any components with a section 304 EHS RQ.
CERCLA RQ	Does not contain any components with a CERCLA RQ.
Section 313	Reporting thresholds not exceeded.

Citric Acid (77-92-9)

TSCA	Listed on the United States Toxic Substances Act (TSCA) inventory
Section 302 (EHS) TPQ	Does not contain any components with a SARA 302 RQ.
Section 304 (EHS) RQ	Does not contain any components with a section 304 EHS RQ.
CERCLA RQ	Does not contain any components with a CERCLA RQ.
Section 313	Reporting thresholds not exceeded.

Nitric Acid (7697-37-2)

TSCA	Listed on the United States Toxic Substances Act (TSCA) inventory
Section 302 (EHS) TPQ	Does not contain any components with a SARA 302 RQ.
Section 304 (EHS) RQ	Does not contain any components with a section 304 EHS RQ.
CERCLA RQ	Does not contain any components with a CERCLA RQ.
Section 313	Reporting thresholds not exceeded.

**15.2. International regulations**

Zinc (7440-66-6)

Canada	All components of this product are on the Canadian Domestic Substances List (DSL)
European Union	No additional information available.
Australia	On the AICS or in compliance with the inventory.
China	On the inventory (IECSC) or in compliance with the inventory.
Other	No additional information available.

Manganese (7439-96-5)

Canada	All components of this product are on the Canadian Domestic Substances List (DSL)
European Union	No additional information available.
Australia	On the AICS or in compliance with the inventory.
China	On the inventory (IECSC) or in compliance with the inventory.
Other	No additional information available.



Citric Acid (77-92-9)

Canada	All components of this product are on the Canadian Domestic Substances List (DSL)
European Union	No additional information available.
Australia	On the AICS or in compliance with the inventory.
China	On the inventory (IECSC) or in compliance with the inventory.
Other	No additional information available.

Nitric Acid (7697-37-2)

Canada	All components of this product are on the Canadian Domestic Substances List (DSL)
European Union	No additional information available.
Australia	On the AICS or in compliance with the inventory.
China	On the inventory (IECSC) or in compliance with the inventory.
Other	No additional information available.

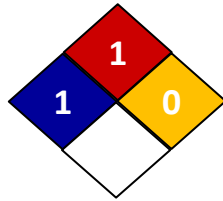
**15.3. US State Regulations**

No additional information available.

**SECTION 16: Other information**

Other information : None

NFPA/HMIS :



<b>Health</b>	<b>2</b>
<b>Fire</b>	<b>0</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal Protection</b>	<b>D</b>

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall QualiTech, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even is QualiTech, Inc. has been advised of the possibility of such damages.*