

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

1.1. Product Identifier

Product name : Qmin™ Zn-Fe-Mn
Product code : 7335
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)



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

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	<10
Iron	7439-89-6	<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 ³)	Not established
OSHA PEL, TWA (mg/m ³)	Not established
NIOSH IDLH (mg/m ³)	Not established

Iron (7439-89-6)	
NIOSH REL, TWA (mg/m ³)	Not established
OSHA PEL, TWA (mg/m ³)	Not established
NIOSH IDLH (mg/m ³)	Not established

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

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

Nitric Acid (7697-37-2)	
NIOSH REL, TWA (mg/m ³)	Not established
OSHA PEL, TWA (mg/m ³)	Not established
NIOSH IDLH (mg/m ³)	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
Iron (7439-89-6)	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 Substances Act (TSCA) inventory

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.

Iron (7439-89-6)

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.

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.

Iron (7439-89-6)

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

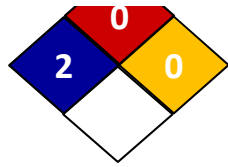
No additional information available.

SECTION 16: Other information

Other information : None

NFPA/HMIS :





Fire	0
Reactivity	0
Personal Protection	D

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 if QualiTech, Inc. has been advised of the possibility of such damages.