



Q-Bio™ Zn-Fe-Mn Safety Data Sheet

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

Revision date: 07/22/2021

Supersedes: N/A

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

1.1. Product Identifier

Product name : Q-Bio™ Zn-Fe-Mn
Product code : 8535
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 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
P312 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	10-15
Iron	7439-89-6	<10
Manganese	7439-96-5	<5
Citric Acid	77-92-9	<5
Acetic Acid	64-19-7	>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
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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
Manganese (7439-96-5)	
NIOSH REL, TWA (mg/m ³)	1
OSHA PEL, TWA (mg/m ³)	5
NIOSH IDLH (mg/m ³)	5
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

Acetic Acid (64-19-7)	
NIOSH REL, TWA (mg/m ³)	Not established
OSHA PEL, TWA (mg/m ³)	Not established
NIOSH IDLH (mg/m ³)	Not established
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

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 - 3.0

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
Acetic Acid (64-19-7)	Oral Rat LD50: 3310 mg/kg; LD50 skin rabbit 1060 mg/kg

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

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.

Acetic Acid (64-19-7)

TSCA	All of the ingredients in this product are listed on the EPA TSCA Inventory
Section 302 (EHS) TPQ	No additional information available.
Section 304 (EHS) RQ	No additional information available.
CERCLA RQ	No additional information available.
Section 313	This product contains the following chemicals subject to Annual Release Reporting Requirements

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.

Acetic Acid (64-19-7)

Canada	No additional information available.
European Union	No additional information available.
Australia	No additional information available.
China	No additional information available.
Other	No additional information available.

15.3. US State Regulations

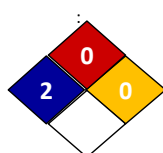
No additional information available.

SECTION 16: Other information

Other information

: None

NFPA/HMIS



Health	2
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.