

MIC DROP

Safety Data Sheet

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

Date of issue: 07/08/2021

Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product code : 8460

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Fertilisers

1.3. Supplier

Target Specialty Products
15415 Marquardt Ave
Santa Fe Springs, 90670 - United States

1.4. Emergency telephone number

Emergency number : 1-800-535-5053
For Chemical Emergency Call INFOTRAC 24hr/day 7days/week
Within USA and Canada: 1-800-553-5053
Outside USA and Canada: 1-352-323-3500
(collect calls accepted)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation Category 2	H315 Causes skin irritation
Serious eye damage/eye irritation Category 2	H319 Causes serious eye irritation
Specific target organ toxicity (repeated exposure) Category 2	H373 May cause damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment - Acute Hazard Category 3	H402 Harmful to aquatic life
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412 Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning

Hazard statements (GHS US) : H315 - Causes skin irritation
H319 - Causes serious eye irritation
H373 - May cause damage to organs through prolonged or repeated exposure
H402 - Harmful to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS US) : P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face 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 water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P314 - Get medical advice/attention if you feel unwell.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local regulations

2.3. Other hazards which do not result in classification

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

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classification

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
FERROUS SULFATE	(CAS-No.) 7782-63-0	10 – 20
CITRIC ACID	(CAS-No.) 77-92-9	1 – 5
MANGANESE SULFATE	(CAS-No.) 10034-96-5	1 – 5
ZINC SULFATE	(CAS-No.) 7446-19-7	1 – 5

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Get medical advice/attention if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : 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.
- First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after skin contact : Irritation.
- Symptoms/effects after eye contact : Eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

- Fire hazard : No fire hazard.
- Explosion hazard : No direct explosion hazard.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Do not enter fire area without proper protective equipment, including respiratory protection.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Do not handle until all safety precautions have been read and understood.

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling	: Ensure good ventilation of the work station. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

MIC DROP	
No additional information available	
CITRIC ACID (77-92-9)	
No additional information available	
FERROUS SULFATE (7782-63-0)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	1 mg/m ³
MANGANESE SULFATE (10034-96-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	0.1 mg/m ³ (Inhalable fraction)
ZINC SULFATE (7446-19-7)	
No additional information available	

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Brown
Odor	: characteristic
Odor threshold	: No data available
pH	: 2.3
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

CITRIC ACID (77-92-9)	
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
ATE US (oral)	5400 mg/kg body weight

FERROUS SULFATE (7782-63-0)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Read-across, Anhydrous form, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	> 1.1 mg/l (EPA OPP 81-3: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Read-across, Anhydrous form, Inhalation)
ATE US (dust, mist)	1.5 mg/l/4h

ZINC SULFATE (7446-19-7)	
LD50 oral rat	1710 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value, Anhydrous form, Oral)
ATE US (oral)	1710 mg/kg body weight

Skin corrosion/irritation	: Causes skin irritation. pH: 2.3
Serious eye damage/irritation	: Causes serious eye irritation. pH: 2.3
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.

CITRIC ACID (77-92-9)	
LOAEL (oral, rat, 90 days)	8000 mg/kg body weight Animal: rat
NOAEL (oral, rat, 90 days)	4000 mg/kg body weight Animal: rat

MANGANESE SULFATE (10034-96-5)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life. Harmful to aquatic life with long lasting effects.
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CITRIC ACID (77-92-9)	
LC50 fish 1	440 – 760 mg/l (Equivalent or similar to OECD 203, 48 h, Leuciscus idus, Static system, Fresh water, Experimental value, Nominal concentration)

FERROUS SULFATE (7782-63-0)	
LC50 fish 1	925 mg/l (96 h, Poecilia reticulata, Static system, Literature study)
EC50 Daphnia 1	152 mg/l (48 h, Daphnia magna, Literature study, Anhydrous form)

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MANGANESE SULFATE (10034-96-5)	
LC50 fish 1	33.8 mg/l (96 h, Pimephales promelas, Anhydrous form)
EC50 Daphnia 1	8.28 mg/l (48 h, Daphnia magna, Anhydrous form)

ZINC SULFATE (7446-19-7)	
LC50 fish 1	0.33 – 0.78 mg/l (96 h, Pimephales promelas, Static system, Fresh water, Experimental value, Anhydrous form)
EC50 Daphnia 1	1.13 mg/l (48 h, Ceriodaphnia dubia, Literature study, Monohydrate)

12.2. Persistence and degradability

CITRIC ACID (77-92-9)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.42 g O ₂ /g substance
Chemical oxygen demand (COD)	0.728 g O ₂ /g substance
ThOD	0.686 g O ₂ /g substance
BOD (% of ThOD)	0.89 (20 day(s), Literature study)

FERROUS SULFATE (7782-63-0)	
Persistence and degradability	Biodegradability in soil: no data available. Readily biodegradable in water.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

MANGANESE SULFATE (10034-96-5)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

ZINC SULFATE (7446-19-7)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

CITRIC ACID (77-92-9)	
BCF other aquatic organisms 1	3.2 l/kg (Calculated value)
Partition coefficient n-octanol/water (Log Pow)	-1.8 – -1.55 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

FERROUS SULFATE (7782-63-0)	
BCF fish 1	≤ 20 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, Fresh weight)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

ZINC SULFATE (7446-19-7)	
BCF other aquatic organisms 1	38 – 28960 (28 day(s), Palaemon elegans, Semi-static system, Salt water, Read-across, Fresh weight)
Bioaccumulative potential	Bioaccumable.

12.4. Mobility in soil

CITRIC ACID (77-92-9)	
Ecology - soil	No (test)data on mobility of the substance available.

FERROUS SULFATE (7782-63-0)	
Ecology - soil	Adsorbs into the soil.

ZINC SULFATE (7446-19-7)	
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Disposal methods

- Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

FERROUS SULFATE	CAS-No. 7782-63-0	10 – 20%
MANGANESE SULFATE	CAS-No. 10034-96-5	1 – 5%
ZINC SULFATE	CAS-No. 7446-19-7	1 – 5%

FERROUS SULFATE (7782-63-0)

CERCLA RQ	1000 lb
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15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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Full text of H-phrases:

H315	Causes skin irritation
H319	Causes serious eye irritation
H373	May cause damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

Hazard Rating

- Health : 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 Minimal Hazard - Materials that will not burn
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
Personal protection : B
B - Safety glasses, Gloves

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.