

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
 Product name : EB Mix
 Product code : 80633

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.3. Details of the supplier of the safety data sheet**

West Central Inc.
 2700 Trott Avenue SW
 PO Box 897
 Willmar, MN 56201
 T 1-320-235-8518 - F 1-320-235-7929
www.westcentralinc.com

1.4. Emergency telephone number

Emergency number : 1-800-424-9300
 ChemTrec

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****GHS-US classification**

Aquatic Acute 3 H402

Full text of H-statements: see section 16

2.2. Label elements**GHS-US labelling**

Hazard statements (GHS-US) : H402 - Harmful to aquatic life
 Precautionary statements (GHS-US) : P273 - Avoid release to the environment
 P501 - Dispose of contents/container to Dispose of at a licensed hazardous waste facility in accordance with state and local regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients**3.1. Substance**

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
manganese(II)sulfate, monohydrate	(CAS No) 10034-96-5	1 - 10	Aquatic Acute 2, H401
iron(II) sulfate, heptahydrate	(CAS No) 7782-63-0	1 - 10	Acute Tox. 4 (Oral), H302
zinc sulfate, monohydrate	(CAS No) 7446-19-7	1 - 10	Aquatic Acute 1, H400

Full text of H-statements: see section 16

SECTION 4: First aid measures**4.1. Description of first aid measures**

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
 First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow breathing of fresh air. Allow the victim to rest.
 First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water.

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- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist. Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center or a doctor if you feel unwell.

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

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Sand. Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
- Hygiene measures : 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

- Storage conditions : Keep only in original container in a cool well ventilated area. Keep container closed when not in use. Store in a well-ventilated place. Keep cool.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Direct sunlight.
- Storage temperature : 25 (5 - 42) °C

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

EB Mix		
ACGIH	Not applicable	
OSHA	Not applicable	
manganese(II)sulfate, monohydrate (10034-96-5)		
ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³ (Manganese, inorganic compounds, as Mn; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction)
OSHA	Not applicable	
zinc sulfate, monohydrate (7446-19-7)		
ACGIH	Not applicable	
OSHA	Not applicable	
iron(II) sulfate, heptahydrate (7782-63-0)		
ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³ (Iron salts, soluble, as Fe; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
OSHA	Not applicable	

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses. Safety glasses.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: Wear appropriate mask.
Environmental exposure controls	: Avoid release to the environment.
Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: brown
Odour	: Characteristic odour
Odour threshold	: No data available
pH	: 8 - 9.5
Melting point	: Not applicable
Freezing point	: <= 0 °C
Boiling point	: >= 100 °C
Flash point	: None
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Relative vapour density at 20 °C	: No data available
Density	: 1.248 g/ml

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Solubility	: Soluble in water. Water: Solubility in water of component(s) of the mixture : • manganese(II)sulfate, monohydrate: 100 g/100ml • disodium tetraborate, pentahydrate: 3.6 g/100ml • iron(II) sulfate, heptahydrate: 42 g/100ml • zinc sulfate, monohydrate: 35 g/100ml • boric acid: 4.8 g/100ml
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

VOC content : <= 10 g/l

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

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

iron(II) sulfate, heptahydrate (7782-63-0)	
LD50 oral rat	1480 mg/kg (Rat)
ATE US (oral)	1480.000 mg/kg bodyweight

Skin corrosion/irritation : Not classified
pH: 8 - 9.5

Serious eye damage/irritation : Not classified
pH: 8 - 9.5

Respiratory or skin sensitisation : 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

Aspiration hazard : Not classified

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

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life.
Ecology - water : Harmful to aquatic life.

manganese(II)sulfate, monohydrate (10034-96-5)

EC50 Daphnia 1	8.28 mg/l (EC50; 48 h)
LC50 fish 2	33.8 mg/l (LC50; 96 h)

zinc sulfate, monohydrate (7446-19-7)

EC50 Daphnia 1	0.56 mg/l (EC50; 48 h)
LC50 fish 2	2.4 mg/l (LC50; 96 h)
Threshold limit algae 1	.05 - .36, EC50; 72 h

iron(II) sulfate, heptahydrate (7782-63-0)

LC50 fish 1	925 mg/l (LC50; 96 h; Poecilia reticulata)
EC50 Daphnia 2	152 mg/l (EC50; 48 h)

12.2. Persistence and degradability

EB Mix

Persistence and degradability	Not established.
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manganese(II)sulfate, monohydrate (10034-96-5)

Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

zinc sulfate, monohydrate (7446-19-7)

Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

iron(II) sulfate, heptahydrate (7782-63-0)

Persistence and degradability	Biodegradability in water: no data available. Biodegradability in soil: no data available. Adsorbs into the soil.
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12.3. Bioaccumulative potential

EB Mix

Bioaccumulative potential	Not established.
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zinc sulfate, monohydrate (7446-19-7)

BCF fish 1	59 - 242 (BCF)
BCF fish 2	59 - 242 (BCF)
Bioaccumulative potential	Bioaccumable.

iron(II) sulfate, heptahydrate (7782-63-0)

Bioaccumulative potential	Not bioaccumulative.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

Other information : Avoid release to the environment.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Waste disposal recommendations : Dispose of contents/container to a licensed hazardous waste facility in accordance with state and local agencies.
- Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

- In accordance with DOT
- Not regulated for transport

Additional information

- Other information : No supplementary information available.

ADR

- No additional information available

Transport by sea

- No additional information available

Air transport

- No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

manganese(II)sulfate, monohydrate (10034-96-5)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 313 - Emission Reporting	31 % Manganese as found in Manganese Sulfate (N450 Manganese Compounds)
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zinc sulfate, monohydrate (7446-19-7)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 313 - Emission Reporting	36.43 % Zinc as found in Zinc Sulfate (N982 Zinc Compounds)
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iron(II) sulfate, heptahydrate (7782-63-0)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Not subject to reporting requirements of the United States SARA Section 313

RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
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15.2. International regulations

CANADA

- No additional information available

EU-Regulations

- No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

- No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

- Not classified

National regulations

- No additional information available

15.3. US State regulations

iron(II) sulfate, heptahydrate (7782-63-0)

U.S. - Pennsylvania - RTK (Right to Know) List

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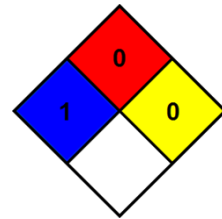
SECTION 16: Other information

Other information : None.

Full text of H-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Acute 2	Hazardous to the aquatic environment — Acute Hazard, Category 2
Aquatic Acute 3	Hazardous to the aquatic environment — Acute Hazard, Category 3
H302	Harmful if swallowed
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard : 0 - Materials that will not burn.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
NFPA specific hazard : None



HMIS III 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 : C
C - Safety glasses, Gloves, Synthetic apron

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