

SECTION 1 Identification

1.1. Product Identifier

Product form : Mixture
Product name : 16-6-8 Empro
Product code : M74119

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

No additional information available

1.4. Supplier's details

JR Simplot Company
P.O. Box 70013
Boise, ID, 83707
T 1-208-336-2110

1.5. Emergency phone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Serious eye damage/eye irritation, Category 2B	H320	Causes eye irritation.
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation.

Full text of H statements : see section 16

2.2. Label elements

GHS US labelling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Warning

Hazard statements (GHS US)

: H320 - Causes eye irritation
H335 - May cause respiratory irritation

Precautionary statements (GHS US)

: P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P304+P340 - If inhaled: Remove person to fresh air and keep 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. Continue rinsing.
P312 - Call a poison center or doctor if you feel unwell.
P337+P313 - If eye irritation persists: Get medical advice or attention.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.

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P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product Identifier	%	GHS US classification
ammonium sulphate	CAS-No.: 7783-20-2	67	Eye Irrit. 2B, H320 STOT SE 3, H335
Monoammonium Phosphate	CAS-No.: 7722-76-1	13	Eye Irrit. 2B, H320 STOT SE 3, H335
Iron Oxysulfate	-	2.5	Eye Irrit. 2B, H320
diammoniumhydrogenphosphate	CAS-No.: 7783-28-0	2	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
Sand	-	1.81	STOT SE 3, H335

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

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	: Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water.
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/effects, acute and delayed

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact	: Mild eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

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4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

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 : Fight fire from safe distance and protected location. 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 : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

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".
Emergency procedures : Evacuate unnecessary personnel.

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Wear personal protective equipment.

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Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Packaging materials	: Store always product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

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, such as personal protective equipment

Personal protective equipment:

Wear recommended 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):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Solid
Appearance	: Gray granules.
Color	: Mixture contains one or more component(s) which have the following color(s): Colorless White Colourless to white Commercial substance: grey-green Colourless-white Unpurified: grey-brown
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable

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Boiling point	: No data available
Flash point	: Not applicable
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Partially soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Explosion limits	: Not applicable
Particle characteristics	: No data available

Iron Oxsulfate

Particle characteristics	No data available
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Monoammonium Phosphate

Particle characteristics	No data available
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diammoniumhydrogenphosphate

Particle characteristics	No data available
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Sand

Particle characteristics	No data available
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ammonium sulphate

Particle characteristics	No data available
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9.2. Data relevant with regard to physical hazard classes (supplemental)

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

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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

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

Monoammonium Phosphate (7722-76-1)

LD50 oral rat	> 2000 mg/kg body weight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg Source: International Uniform Chemical Information Database
LC50 Inhalation - Rat	> 5 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Read-across, Inhalation (dust), 14 day(s))

diammoniumhydrogenphosphate (7783-28-0)

LD50 oral rat	> 2000 mg/kg body weight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 5000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 5 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))

ammonium sulphate (7783-20-2)

LD50 oral rat	4250 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 7 day(s))
LD50 dermal rat	> 2000 mg/kg
ATE US (oral)	4250 mg/kg body weight

Skin corrosion/irritation : Not classified

Monoammonium Phosphate (7722-76-1)

pH	3.6 – 4 (1 %)
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diammoniumhydrogenphosphate (7783-28-0)

pH	8
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ammonium sulphate (7783-20-2)

pH	5.5 (1.3 %)
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Serious eye damage/irritation : Causes eye irritation.

Monoammonium Phosphate (7722-76-1)

pH	3.6 – 4 (1 %)
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diammoniumhydrogenphosphate (7783-28-0)

pH	8
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ammonium sulphate (7783-20-2)

pH	5.5 (1.3 %)
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Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.

Monoammonium Phosphate (7722-76-1)

STOT-single exposure	May cause respiratory irritation.
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diammoniumhydrogenphosphate (7783-28-0)

STOT-single exposure	May cause respiratory irritation.
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Sand

STOT-single exposure	May cause respiratory irritation.
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ammonium sulphate (7783-20-2)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

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Viscosity, kinematic	Not applicable
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Iron Oxyulfate

Viscosity, kinematic	No data available
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Monoammonium Phosphate (7722-76-1)

Viscosity, kinematic	No data available
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diammoniumhydrogenphosphate (7783-28-0)

Viscosity, kinematic	Not applicable (solid)
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Sand

Viscosity, kinematic	No data available
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ammonium sulphate (7783-20-2)

Viscosity, kinematic	Not applicable (solid)
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Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact	: Mild eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Monoammonium Phosphate (7722-76-1)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, <i>Oncorhynchus mykiss</i> , Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): <i>Raphidocelis subcapitata</i> (previous names: <i>Pseudokirchneriella subcapitata</i> , <i>Selenastrum capricornutum</i>)
ErC50 algae	> 97.1 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, <i>Pseudokirchneriella subcapitata</i> , Static system, Fresh water, Experimental value, GLP)
diammoniumhydrogenphosphate (7783-28-0)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, <i>Oncorhynchus mykiss</i> , Semi-static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: <i>Daphnia</i> sp. Acute Immobilisation Test, 48 h, <i>Daphnia magna</i> , Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, <i>Pseudokirchneriella subcapitata</i> , Static system, Fresh water, Experimental value, Growth rate)
ammonium sulphate (7783-20-2)	
LC50 - Fish [1]	53 mg/l (96 h, <i>Oncorhynchus mykiss</i> , Fresh water)
EC50 - Crustacea [1]	169 mg/l (48 h, <i>Daphnia magna</i> , Static system, Fresh water)

12.2. Persistence and degradability

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Persistence and degradability	Rapidly degradable
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Iron Oxysulfate

Persistence and degradability	Not established.
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Monoammonium Phosphate (7722-76-1)

Persistence and degradability	Biodegradability in water: no data available, Not established.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

diammoniumhydrogenphosphate (7783-28-0)

Persistence and degradability	Biodegradability in water: no data available, Not established.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

Sand

Persistence and degradability	Not established.
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ammonium sulphate (7783-20-2)

Persistence and degradability	Biodegradability in water: no data available, Not established.
Chemical oxygen demand (COD)	Not applicable (inorganic)

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ammonium sulphate (7783-20-2)	
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Iron Oxysulfate	
Bioaccumulative potential	Not established.

Monoammonium Phosphate (7722-76-1)	
Bioaccumulative potential	Not bioaccumulative. Not established.

diammoniumhydrogenphosphate (7783-28-0)	
Bioaccumulative potential	No bioaccumulation data available. Not established.

Sand	
Bioaccumulative potential	Not established.

ammonium sulphate (7783-20-2)	
Partition coefficient n-octanol/water (Log Pow)	-5.1 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

12.4. Mobility in soil

Monoammonium Phosphate (7722-76-1)	
Ecology - soil	No (test)data on mobility of the substance available.

diammoniumhydrogenphosphate (7783-28-0)	
Surface tension	No data available in the literature
Ecology - soil	No (test)data on mobility of the substance available.

ammonium sulphate (7783-20-2)	
Ecology - soil	Adsorption to soil is possible.

12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No

SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14 Transport information

14.1. UN number

UN-No. (DOT)	: Not applicable
UN-No. (TDG)	: Not applicable

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UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT) : Not applicable
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not applicable

TDG
Transport hazard class(es) (TDG) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable
Packing group (TDG) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not applicable

TDG
Not applicable

IMDG
Not applicable

IATA
Not applicable

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Iron Oxysulfate	CAS-No.	2.5%
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Sand	CAS-No.	1.81%
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15.2. International regulations

CANADA

Monoammonium Phosphate (7722-76-1)

Listed on the Canadian DSL (Domestic Substances List)

diammoniumhydrogenphosphate (7783-28-0)

Listed on the Canadian DSL (Domestic Substances List)

Sand

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

ammonium sulphate (7783-20-2)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Monoammonium Phosphate (7722-76-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. 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

Component	State or local regulations
ammonium sulphate(7783-20-2)	U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

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

Revision date : 3/26/2025

Issue date : 9/23/2020

Full text of hazard classes and H-statements

H315	Causes skin irritation
H320	Causes eye irritation
H335	May cause respiratory irritation

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