SulFeGro

Safety Data Sheet

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

Date of issue: 06/03/2021

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : SulFeGro

1.2. Recommended use and restrictions on use

1.3. Supplier

INNVICTIS® BIOSCIENCE
PLANT HEALTH TECHNOLOGIES
P.O. Box 9296
Boise ID 83707, - USA
T 855-466-8428

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Serious eye damage/eye irritation, Category 1 H318 Causes serious eye damage.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) : H318 - Causes serious eye damage.

Precautionary statements (GHS US) : P280 - Wear eye protection, face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a doctor, a POISON CENTER
Dispose of contents/container to …in accordance with local/regional/national regulations

2.3. Other hazards which do not result in classification

No additional information available

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	%	GHS-US classification
Water	(CAS-No.) 7732-18-5	60 – 65	Not classified
zinc sulfate	(CAS-No.) 7733-02-0	3 – 35	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
iron(II)sulfate	(CAS-No.) 7720-78-7	5 – 10	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315

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 : 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 : Allow affected person to breathe 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.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

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

Symptoms/effects after eye contact : Causes serious eye damage.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

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 : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

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

Precautions for safe handling : 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 : Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products	:	Strong bases. Strong acids.
Incompatible materials	:	Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SulFeGro	
No additional information available	
Water (7732-18-5)	
No additional information available	
zinc sulfate (7733-02-0)	
No additional information available	
iron(II)sulfate (7720-78-7)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m³)	1 mg/m³

8.2. Appropriate engineering controls

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Wear appropriate mask

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	:	Blue-green
Odour	:	sour, metallic odor
Odour threshold	:	No data available
pH	:	1.5 – 2.5
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	> 600 °C
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	1.06 – 1.26 g/ml (water=1)
Solubility	:	Soluble in water.
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
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

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

zinc sulfate (7733-02-0)	
LD50 oral rat	1000 – 2000 mg/kg (Rat)

iron(II)sulfate (7720-78-7)	
LD50 oral rat	319 mg/kg (Rat; Literature)

Skin corrosion/irritation	:	Not classified. pH: 1.5 – 2.5
Serious eye damage/irritation	:	Causes serious eye damage. pH: 1.5 – 2.5
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified
Viscosity, kinematic	:	No data available
Potential adverse human health effects and symptoms	:	Based on available data, the classification criteria are not met.

Symptoms/effects after eye contact : Causes serious eye damage.

SECTION 12: Ecological information

12.1. Toxicity

zinc sulfate (7733-02-0)	
LC50 fish 1	1.7 mg/l (96 h; Poecilia reticulata)
EC50 Daphnia 1	1 mg/l (24 h; Daphnia magna)
LC50 fish 2	2.4 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	0.56 mg/l (48 h; Daphnia magna)
Threshold limit algae 1	136 µg/l (72 h; Selenastrum capricornutum; Growth rate)
Threshold limit algae 2	24 µg/l (3 days; Selenastrum capricornutum; Growth rate)

iron(II)sulfate (7720-78-7)	
LC50 fish 1	925 mg/l (96 h; Poecilia reticulata; Heptahydrate)
EC50 Daphnia 1	7.2 mg/l (48 h; Daphnia magna; Metal ion)
LC50 fish 2	100 mg/l (96 h; Oryzias latipes; GLP)
EC50 Daphnia 2	152 mg/l (48 h; Daphnia magna; Heptahydrate)
Threshold limit algae 1	130 mg/l (72 h; Pseudokirchneriella subcapitata; Heptahydrate)
Threshold limit algae 2	3.2 mg/l (72 h; Pseudokirchneriella subcapitata; Heptahydrate)

12.2. Persistence and degradability

SulFeGro	
Persistence and degradability	Not established.

Water (7732-18-5)	
Persistence and degradability	Not established.

zinc sulfate (7733-02-0)	
Persistence and degradability	Biodegradability: not applicable. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

iron(II)sulfate (7720-78-7)	
Persistence and degradability	Biodegradability in water: no data available. No (test)data on mobility of the substance available. Not established.

12.3. Bioaccumulative potential

SulFeGro	
Bioaccumulative potential	Not established.

Water (7732-18-5)	
Bioaccumulative potential	Not established.

zinc sulfate (7733-02-0)	
BCF fish 1	59 – 242 (Cyprinus carpio; Test duration: 8 weeks)
Bioaccumulative potential	Bioaccumable. Not established.

iron(II)sulfate (7720-78-7)	
BCF fish 1	2 – 20 (28 days; Cyprinus carpio; Heptahydrate)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid unintentional release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid unintentional release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Transport document description (IMDG) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

UN-No. (IMDG) : 3082

Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Class (IMDG) : 9 - Miscellaneous dangerous substances and articles

Packing group (IMDG) : III - substances presenting low danger

Limited quantities (IMDG) : 5 L

Air transport

Transport document description (IATA) : UN 3082 Environmentally hazardous substance, liquid, n.o.s., 9, III

UN-No. (IATA) : 3082

Proper Shipping Name (IATA) : Environmentally hazardous substance, liquid, n.o.s.

Class (IATA) : 9 - Miscellaneous Dangerous Goods

Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

SulFeGro

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

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

zinc sulfate	CAS-No. 7733-02-0	3 – 35%

zinc sulfate (7733-02-0)	
CERCLA RQ	1000 lb

iron(II)sulfate (7720-78-7)	
CERCLA RQ	1000 lb

15.2. International regulations

CANADA

Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)

zinc sulfate (7733-02-0)
Listed on the Canadian DSL (Domestic Substances List)

iron(II)sulfate (7720-78-7)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

Component	State or local regulations
zinc sulfate(7733-02-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
iron(II)sulfate(7720-78-7)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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Other information : None.

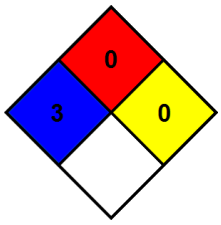
Full text of H-statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

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.

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.