

Safety Data Sheet
FlexForce Foliar

SECTION 1: Identification**1.1 Product identifier**

Product name FlexForce Foliar

1.3 Recommended use of the chemical and restrictions on use

Foliar Fertilizer

1.4 Supplier's details

Name FBSciences Inc
Address 153 North Main Street Suite 100
Collierville TN 38017
USA

Telephone 901-221-1200

1.5 Emergency phone number(s)

CHEMTREC 1-800-424-9300

SECTION 2: Hazard identification**2.1 Classification of the substance or mixture****GHS classification in accordance with: OSHA (29 CFR 1910.1200)**

- Acute toxicity, oral (chapter 3.1), Cat. 5
- Skin corrosion/irritation (chapter 3.2), Cat. 3
- Eye damage/irritation (C.4.5), Cat. 2A

2.2 GHS label elements, including precautionary statements**Pictogram****Signal word****Warning**

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Hazard statement(s)

H319 Causes serious eye irritation

Precautionary statement(s)

P264 Wash hands thoroughly after handling.
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.
P337+P313 If eye irritation persists: Get medical advice/attention.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Mixture composed of reacted ingredients below

Trade secret statement (OSHA 1910.1200(i))

*Exact percentage has been withheld as trade secret.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
In case of skin contact	Wash with plenty of water for at least 15 minutes. Call a poison center or doctor if irritation develops or persists. Acute and delayed symptoms and effects: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.
In case of eye contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention/advice. Acute and delayed symptoms and effects: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
If swallowed	Rinse mouth. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a poison center or doctor if you feel unwell. Acute and delayed symptoms and effects: Harmful if swallowed. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

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4.2 Most important symptoms/effects, acute and delayed

Not expected to present a significant hazard under anticipated conditions of normal use. May cause eye irritation. May produce skin irritation.

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

Treat symptomatically

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Water spray. Dry powder. Foam. Carbon dioxide.

5.2 Specific hazards arising from the chemical

Carbon oxides

5.3 Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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

Avoid all contact with skin, eyes, and clothing. Handle in conformance with good hygiene and safety practices. Information concerning personal protective measures are found in section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Ferrous sulfate (CAS: 7782-63-0 EC: 231-753-5)
2. MANGANESE (II) SULFATE MONOHYDRATE (CAS: 10034-96-5)
3. Zinc sulfate (CAS: 7733-02-0 EC: 231-793-3)

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8.2 Appropriate engineering controls

General industrial hygiene practice.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection

In case of insufficient ventilation, wear A NIOSH certified respirator with APF>10, in accordance with OSHA respirator regulations found in 29 CFR 1910.134.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	liquid
Odor	No data available.
Odor threshold	No data available.
pH	2
Melting point/freezing point	No data available.
Initial boiling point and boiling range	No data available.
Flash point	No data available.
Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	No data available.
Vapor pressure	No data available.
Vapor density	No data available.
Relative density	No data available.
Solubility(ies)	No data available.
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

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

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10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal use conditions.

10.4 Conditions to avoid

None under normal use conditions.

10.5 Incompatible materials

Potassium hydroxide: Nitro compounds, Organic materials, Magnesium, Copper, Water, reacts violently with:, Metals, Light metals, Contact with aluminum, tin and zinc liberates hydrogen gas. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts., vigorous reaction with:, Alkali metals, Halogens, Azides, Anhydrides

Phosphoric acid : Strong bases, Powdered metals

Citric acid: Oxidizing agents, Bases, Reducing agents, Nitrates

10.6 Hazardous decomposition products

Potassium hydroxide: Other decomposition products - No data available
Hazardous decomposition products formed under fire conditions. - Potassium oxides
In the event of fire: see section 5

Phosphoric acid : Hazardous decomposition products formed under fire conditions. - Oxides of phosphorus
Other decomposition products - No data available

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Not classified.

ATE (oral) of mixture: 5000 mg/kg

Skin corrosion/irritation

May cause skin irritation.

Serious eye damage/irritation

Causes eye irritation.

Respiratory or skin sensitization

No data available

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Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Based on available data, classification data are not met

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

SECTION 12: Ecological information

Toxicity

No data available.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

No data available.

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal of the product

Dispose of contents/container in accordance with local, regional, national, and international regulations.

Disposal of contaminated packaging

Dispose in a safe manner in accordance with local/national regulations

SECTION 14: Transport information

14.1	UN Number	None
14.2	UN Proper Shipping Name	None
14.3	Transport hazard class(es)	None

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14.4	Packing group	None
14.5	Environmental hazards	None
14.6	Special precautions for user	None
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	None

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canadian Domestic Substances List (DSL)

Chemical name: Sulfuric acid, zinc salt (1:1)

CAS: 7733-02-0

Chemical name: Sulfuric acid, zinc salt (1:1), monohydrate

CAS: 7446-19-7

Chemical name: Sulfuric acid, iron(2++) salt (1:1)

CAS: 7720-78-7

Chemical name: 1,2,3-Propanetricarboxylic acid, 2-hydroxy-

CAS: 77-92-9

Chemical name: 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, monohydrate

CAS: 5949-29-1

Chemical name: Water

CAS: 7732-18-5

Massachusetts Right To Know Components

Chemical name: Zinc sulfate

CAS number: 7733-02-0

Chemical name: Ferrous sulfate

CAS number: 7720-78-7

No components are subject to the Massachusetts Right to Know Act.

New Jersey Right To Know Components

Common name: ZINC SULFATE

CAS number: 7733-02-0

Common name: FERROUS SULFATE

CAS number: 7720-78-7

Water

CAS-No. 7732-18-5

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Pennsylvania Right To Know Components

Chemical name: Sulfuric acid, zinc salt (1:1)

CAS number: 7733-02-0

Chemical name: Sulfuric acid, iron(2+) salt (1:1)

CAS number: 7720-78-7

Water

CAS-No. 7732-18-5

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards

Acute Health Hazard

No SARA Hazards

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SECTION 16: Other information

16.1 Further information/disclaimer

The directions for use of this product are believed to be adequate and must be followed carefully. The use of this product is beyond the control of the manufacturer, and, therefore, to the extent consistent with applicable law, no warranty, representation, or guarantee of any kind, expressed or implied, is made as to the effects of such use or any results obtained if not used in accordance with printed directions and established safe practice or if unusual or extraordinary weather conditions occur. To the extent consistent with applicable law, the buyer's exclusive remedy and manufacturer's or seller's exclusive liability in tort or otherwise, shall be limited, at the manufacturer's option, to replacement of, or the repayment of the purchase price for, the quantity of product with respect to which damages are claimed.

The information and recommendations contained herein are based upon data believed to be correct. However, there is no guarantee or warranty of any kind expressed or implied made with respect to the information contained herein.