



FBSCIENCES INC

# **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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|                                   |   |
|-----------------------------------|---|
| <b>Hazard statement(s)</b>        |   |
| H319                              | Causes serious eye irritation   |
| <b>Precautionary statement(s)</b> |   |
| 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.   |

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## 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.

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## 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.<br><br>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.<br><br>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.<br><br>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

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## 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.

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## 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.

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## 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.

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## 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.

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## 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.

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## 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

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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

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Phosphoric acid : Strong bases, Powdered metals

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

### 10.6 Hazardous decomposition products

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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

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

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## 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.

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## 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.

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## 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

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## 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 |

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## **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.

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## 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.

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