



*Rooted in Science*

## SAFETY DATA SHEET

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

#### 1.1 Product Identifier

**Trade Name** Moxie 6-0-4

**SDS Date** May 30, 2018

#### 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

**Product Use:** Foliar Nutrient

**Uses Advised Against:** To be used only where there is a recognized need. Do not exceed the appropriate dose rates.

#### 1.3 Details of the Supplier of the Substance or Mixture

**Manufacturer:** Floratine Products Group, Inc.  
355 East South Street  
Collierville, TN 38017  
+1 901-853-2898

#### 1.4 Emergency Telephone Number

**Emergency Spill Information** 1(800) 535-5053 for US and Canada (INFOTRAC)  
+1(352) 323-3500 for International Calls (call INFOTRAC collect)

**Other Product Information:** [cs@floratine.com](mailto:cs@floratine.com)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the Substance or Mixture

##### CLP/GHS Classification (1272/2008):

Skin Corrosion Category 1B (H314)

Eye Damage Category 1 (H318)

#### 2.2 Label Elements

**Danger!**



Contains 2-7% Ferric Nitrate.

##### Hazard Phrases

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

## Precautionary Phrases:

P260 Do not breathe mists.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area

P280 Wear protective gloves, protective clothing, eye protection, and face protection.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P310 Immediately call a POISON CENTER or doctor.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P363 Wash contaminated clothing before reuse.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 Immediately call a POISON CENTER or doctor.

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 POISON CENTER or doctor.

P403+P233 STORE in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents and container in accordance with local and national regulations.

**2.3 Other Hazards: None****SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2 Mixture**

Chemical Name	CAS Number / EINECS Number	% (w/w)	CLP/GHS Classification (1272/2008)
Magnesium Nitrate	13446-18-9 / 232-826-7 /	15-20%	Acute Tox. 4 (H302) Skin Corr. 1B (H314) Eye Dam 1 (H318)
Nitric acid, ammonium calcium salt	15245-12-2 / 239-289-5	10-15%	Acute Tox. 4 (H302) Eye Dam. 1 (H318)
Potassium Nitrate	7757-79-1 / 231-818-8	5-10%	Skin Irrit. 2 (H315) Eye Irrit 2A (H319) STOT SE 3 (H335)
Ferric Nitrate, nonahydrate	7782-61-8 / 233-899-5	3-7%	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) STOT SE 3 (H335)
Cupric Nitrate	Proprietary	<1%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit.2 (H319)

See Section 16 for full text of GHS Classifications.

**SECTION 4: FIRST AID MEASURES****4.1 Description of First Aid Measures****First Aid**

**Eye contact:** In case of contact with eyes, flush immediately with water for 20 minutes while lifting the upper and lower lids. Get immediate medical attention.

**Skin contact:** Wash immediately with plenty of soap and water for at least 30 minutes. Get immediate medical attention. Do not allow product to dry on clothing. Immediately remove contaminated clothing and rinse before reuse.

**Inhalation:** Remove victim to fresh air. If breathing is difficult, oxygen should be given by a trained individual. Get immediate medical attention.

**Ingestion:** Do NOT induce vomiting. If the person is alert, have them rinse their mouth with water and sip one glass of water. Get immediate medical attention. Never give anything by mouth to an unconscious or drowsy person.

**See Section 11 for more detailed information on health effects.**

**4.2 Most Important symptoms and effects, both acute and delayed:** Causes severe skin burns and eye damage. Causes skin irritation. Swallowing may cause nausea, diarrhea, and esophageal burns. May cause burns to nasal passages if inhaled.

**4.3 Indication of any immediate medical attention and special treatment needed:** Get immediate medical attention for all routes of exposure.

## SECTION 5: FIREFIGHTING MEASURES

**5.1 Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam. Cool fire exposed containers with water.

### 5.2 Special Hazards Arising from the Substance or Mixture

**Unusual Fire and Explosion Hazards:** Product may intensify a surrounding fire.

**Combustion Products:** Oxides of carbon, iron, potassium, magnesium, calcium and copper.

**5.3 Advice for Fire-Fighters:** Self-contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Evacuate spill area and keep unprotected personnel away. Prevent contact with the eyes, skin and clothing. Ventilate area. Wear appropriate protective clothing. Keep away from heat, flames and high temperatures. Keep spill away from flammable or combustible materials. Avoid releases to the environment.

### 6.2 Environmental Precautions:

Prevent entry in storm sewers and waterways. Report spill as required by local and national regulations.

### 6.3 Methods and Material for Containment and Cleaning Up:

Dike and contain liquid. Carefully neutralize with soda ash. Exercise caution during neutralization since large amounts of heat may be generated. Collect neutralized liquid with an inert absorbent and place in appropriate containers for disposal. Do NOT use any combustible material – may cause fire.

### 6.4 Reference to Other Sections:

Refer to Section 8 for personal protective equipment and Section 13 for disposal information.

## SECTION 7: HANDLING and STORAGE

### 7.1 Precautions for Safe Handling:

Prevent contact with eyes. Avoid contact with skin and clothing. Do not breathe mists or aerosols. Use with adequate ventilation. Use reasonable care in handling. Do not eat, drink or smoke while using product. Wash thoroughly with soap and water after handling. Keep away from flammable and combustible materials.

### 7.2 Conditions for Safe Storage, Including any Incompatibilities:

Store in a cool, dry, well-ventilated area away from bases. Protect containers from physical damage. Keep from freezing. Keep containers closed. Empty containers retain product residues. Follow all SDS precautions in handling empty containers. Store away from food and feed.

**7.3 Specific end use(s):**

Industrial uses: None identified

Professional uses: Foliar Nutrient

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control Parameters:**

Chemical Name	US OEL	EU IOEL	UK OEL	Biological Limit Value
Ferric Nitrate, nonahydrate Solution	None Established	None Established	None Established	None Established
Potassium Nitrate	None Established	None Established	None Established	None Established
Magnesium Nitrate	None Established	None Established	None Established	None Established
Calcium Nitrate	None Established	None Established	None Established	None Established
Cupric Nitrate	None Established	None Established	None Established	None Established

**8.2 Exposure Controls:****Recommended Monitoring Procedures:** None established.**Appropriate Engineering Controls:** Good outdoor ventilation should be adequate under normal conditions of use.**Personal Protective Measurers****Eye/face Protection:** Chemical goggles and face-shield recommended to prevent eye contact.**Skin Protection:** Wear protective clothing is recommended if needed to avoid skin contact.**Hands:** Impervious gloves are recommended if needed to avoid skin contact.**Respiratory Protection:** None needed under normal use conditions with adequate ventilation. If mists are excessive, an approved particulate respirator can be used. Use respirators in accordance with local and national regulations.**Other protection:** Suitable washing facilities should be available in the work area.**SECTION 9: PHYSICAL and CHEMICAL PROPERTIES****9.1 Information on basic Physical and Chemical Properties****Appearance:** Brown Liquid**Odor Threshold:** Not available**Melting/Freezing Point:** Not determined**Flash Point:** Not flammable**Lower Flammability Limit:** Not applicable**Upper Flammability Limit:** Not applicable**Vapor Density(Air=1):** Not applicable**Solubility:** Complete**Autoignition Temperature:** None**Viscosity:** Not applicable**Oxidizing Properties:** None**Molecular Formula:** Mixture**Odor:** Acid or acrid odor.**pH:** 0.41**Boiling Point:** Not determined**Evaporation Rate:** Not applicable**Vapor Pressure:** Not determined**Relative Density:** 10.81 lb/gal**Octanol/Water Partition Coefficient:** Not determined**Decomposition Temperature:** Not determined**Explosive Properties:** None**Specific Gravity (H<sub>2</sub>O= 1):** 1.29**Molecular Weight:** Mixture**9.2 Other Information:** None available**SECTION 10: STABILITY and REACTIVITY**

**10.1 Reactivity:** Not reactive under normal conditions.

**10.2 Chemical Stability:** Stable.

**10.3 Possibility of Hazardous Reactions:** Contact with strong oxidizers may cause an exothermic reaction producing heat.

**10.4 Conditions to Avoid:** Avoid excessive heat and freezing.

**10.5 Incompatible Materials:** Incompatible with bases and oxidizing agents.

**10.6 Hazardous Decomposition Products:** Decomposition may produce oxides of carbon, iron, potassium, magnesium, calcium and copper.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects:

#### Potential Health Effects:

**Eye Contact:** Causes severe irritation with redness, tearing and stinging. Eye damage may occur.

**Skin contact:** Causes severe irritation or burns.

**Inhalation:** Inhalation of mists may cause irritation of the nose throat and upper respiratory tract. High concentrations may cause lung damage (pulmonary edema).

**Ingestion:** Ingestion may cause severe mucous membrane and gastrointestinal irritation with chemical burns. May cause nausea, vomiting, diarrhea, abdominal pain, chest pain, shortness of breath, profuse sweating, low blood pressure, tachycardia (rapid heartbeat), pulmonary edema, seizures, shock and death.

**Acute toxicity:** No acute toxicity data available for the product.

Calculated ATE for the mixture: Oral >2000 mg/kg

Calcium Nitrate: Oral rat LD50 300-2000 mg/kg

**Skin corrosion/irritation:** Product is corrosive to skin.

**Eye damage/ irritation:** Product is expected to cause eye damage.

**Respiratory Irritation:** No data available. Expected to cause irritation.

**Respiratory Sensitization:** None of the ingredients are classified as respiratory sensitizers.

**Skin Sensitization:** No data available; expected to cause skin irritation or burns.

**Germ Cell Mutagenicity:** None of the ingredients are germ cell mutagens.

**Carcinogenicity:** No data available. None of the components of this product are listed as carcinogens by IARC or the EU CLP.

**Reproductive Toxicity:** None of the components have been shown to reproductive and developmental effects.

#### **Specific Target Organ Toxicity:**

Single Exposure: None known.

Repeat Exposure: None known.

<b>SECTION 12: ECOLOGICAL INFORMATION</b>
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**12.1 Toxicity:** No toxicity data available for the product.

Copper nitrate: 96 hr LC50 Rainbow trout 0.0138; 48 hr LC50 daphnia magna 0.0094 mg/L; 72 hr EC50 Chlamydomonas reinhardtii 0.233 mg/L

**12.2 Persistence and degradability:** Biodegradation is not applicable to inorganic substances.

**12.3 Bioaccumulative Potential:** No data available.

**12.4 Mobility in Soil:** In the soil, product follows natural cycle to provide plant nutrients.

**12.5 Results of PBT and vPvB assessment:** Not required.

**12.6 Other Adverse Effects:** No data available.

<b>SECTION 13: DISPOSAL CONSIDERATIONS</b>
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**13.1 Waste Treatment Methods:**

Dispose in accordance with local/ and national regulations. Not considered hazardous waste according to EU regulations.

<b>SECTION 14: TRANSPORTATION INFORMATION</b>
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	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
<b>US DOT</b>	UN3264	Corrosive liquid, acidic inorganic, n.o.s. (Ferric nitrate soln, magnesium nitrate)	8	II	No
<b>Canadian TDG</b>	UN3264	Corrosive liquid, acidic inorganic, n.o.s. (Ferric nitrate soln, magnesium nitrate)	8	II	No

**14.6 Special Precautions for User:** None

**14.7 Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code:** Not determined.

<b>SECTION 15: REGULATORY INFORMATION</b>
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**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**

**US Regulations**

**CERCLA Section 103:** The normal application of fertilizers is exempt from CERCLA reporting. If an accidental release occurs, contact Floratine Products Group for information.

**SARA Hazard Category (311/312):** Refer to Section 2 for OSHA Hazard Classification.

**SARA 313:** Products used in routine agricultural operations and fertilizers held for resale by retailers is excluded from SARA 313 reporting. Contact Floratine Products Group for additional information.

**California Proposition 65:** This product contains the following substances known to the State of California to cause cancer and/or reproductive harm (birth defects): None known.

**International Chemical Inventories**

**US EPA Toxic Substances Control Act (TSCA) Status:** All of the components of this product are listed on the TSCA inventory or exempt.

<b>SECTION 16: OTHER INFORMATION</b>
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Acute Tox. 4 Acute Toxicity Category 4  
Skin Corr. 1B Skin Corrosion Category 1B  
Eye Dam 1 Eye Damage Category 1

H302 Harmful if swallowed  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.

This safety data sheet provides health and safety information. The product is to be used in applications consistent with best farming practice. Individuals handling this product should be informed under COSHH of the recommended safety precautions and should have access to this information. The product information data sheet is to the best of Floratine's knowledge correct as at the date of publication. Neither Floratine, importer nor local supplier accepts liability for any loss or damage resulting from reliance on this information. Further information on this product may be obtained from the supplier whose name, address and telephone number will be found on the product container. The information provided herein is offered solely for your consideration, investigation and verification. This information herein is provided by Floratine in good faith as accurate at the time of writing but without guarantee. This information includes information which has been generated by other parties and provided to Floratine and which Floratine has not independently verified. The information provided herein relates only to the specific product designated and may not be valid if the product is used in combination with any other materials or in any process.