

# MATERIAL SAFETY DATA SHEET

Turf Magic 21-7-14 with Micro Nutrients

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Turf Magic 21-7-14 with Micro Nutrients  
**Product Use:** Fertilizer  
**Manufacturer/Supplier:** Johnston Seed Company  
319 W. Chestnut  
Enid, OK 73701  
**Phone Number:** 580-249-4449  
**Emergency Phone:** Infotrac: 1-800-535-5053  
**Date of Preparation:** October 7, 2011

## Section 2: HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

WARNING

FLAMMABLE. MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

**Potential Health Effects:** See Section 11 for more information.

**Likely Routes of Exposure:** Skin contact, skin absorption, eye contact, inhalation, and ingestion.

**Eye:** May cause serious eye irritation.

**Skin:** May cause skin irritation.

**Ingestion:** May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

**Inhalation:** Dust may cause respiratory tract irritation.

**Chronic Effects:** Prolonged or repeated contact may dry skin and cause irritation. Can cause damage to respiratory, urinary, blood and reproductive systems.

**Signs and Symptoms:** Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling of the eyes. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms may include coughing, sore throat, difficulty breathing.

**Medical Conditions Aggravated By Exposure:** Asthma, allergies, skin disorders, kidney disorders, and pulmonary disorders.

**Target Organs:** Skin, eyes, gastrointestinal tract, respiratory system.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Potential Environmental Effects:** May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

## Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Diammonium phosphate	7783-28-0	10 - 30
Urea	57-13-6	30 - 60
Potassium chloride	7447-40-7	10 - 30
Ferric oxide	1309-37-1	1 - 5
Ferrous sulphate	7720-78-7	0.5 - 1.5
Zinc oxide	1314-13-2	1 - 5
Zinc sulfate	7733-02-0	0.5 - 1.5

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Calcium oxide	1305-78-8	1 - 5
Silica, amorphous, fumed	7631-86-9	1 - 5
Sulfur, elemental	7704-34-9	1 - 5
Bentonite	1302-78-9	0.1 - 1
Magnesium oxide	1309-48-4	1 - 5

## Section 4: FIRST AID MEASURES

- Eye Contact:** In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.
- Skin Contact:** In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.
- Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).
- Note to Physicians:** Symptoms may not appear immediately.

## Section 5: FIRE FIGHTING MEASURES

- Flammability:** Flammable by OSHA criteria.
- Means of Extinguishment:**
- Suitable Extinguishing Media:** Regular dry chemical, carbon dioxide, water, regular foam.
  - Unsuitable Extinguishing Media:** Not available.
- Products of Combustion:** May include, and are not limited to: oxides of carbon, oxides of nitrogen, ammonia, biuret, cyanide compounds, phosphorous oxides, fluorides, sulfur dioxide, sulfur oxide gas and metal fume.
- Explosion Data:**
- Sensitivity to Mechanical Impact:** Not available.
  - Sensitivity to Static Discharge:** Not available.
- Protection of Firefighters:** Keep upwind of fire due to toxic gases and vapors. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

## Section 6: ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
- Environmental Precautions:** Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.
- Methods for Containment:** Contain and/or absorb spill, then place in an appropriate container.
- Methods for Clean-Up:** Sweep up material and place in appropriate container for use as a fertilizer or for disposal. Provide ventilation.
- Other Information:** Not available.

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## Section 7: HANDLING AND STORAGE

**Handling:** Keep away from sources of ignition. No smoking. Avoid contact with skin and eyes. Do not ingest. Do not breathe dust. Good housekeeping is important to prevent accumulation of dust. Avoid generating dust. Launder contaminated clothing before reuse. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

**Storage:**

Keep out of the reach of children. Keep container tightly closed and dry. Store in a cool place, away from incompatibles.

## Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

Ingredient	Exposure Limits	
	OSHA-PEL	ACGIH-TLV
Diammonium phosphate	15 mg/m <sup>3</sup> TWA (total)	10 mg/m <sup>3</sup> TWA (total)
Urea	Not established.	Not established.
Potassium chloride	5 mg/m <sup>3</sup> (respirable)	Not established.
Ferric oxide	10 mg/m <sup>3</sup>	5 mg/m <sup>3</sup> (iron oxide fume; dust as Fe)
Ferrous sulphate	Not established.	Not established.
Zinc oxide	5 mg/m <sup>3</sup> TWA (fume); 15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (resp)	2 mg/m <sup>3</sup> TWA (resp)
Zinc sulfate	Not established.	Not established.
Calcium oxide	5 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>
Silica, amorphous, fumed	80 mg/m <sup>3</sup> /%SiO <sub>2</sub>	10 mg/m <sup>3</sup>
Sulfur, elemental	Not established.	Not established.
Bentonite	Not established.	Not established.
Magnesium oxide	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>

**Engineering Controls:** Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

**Personal Protective Equipment:**

**Eye/Face Protection:** Wear eye/face protection. Close-fitting safety goggles may be required to prevent eye contact if excessive dust is generated.

**Hand Protection:** Wear appropriate chemical resistant gloves.

**Skin and Body Protection:** Wear appropriate chemical resistant protective clothing.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment.

**General Hygiene Considerations:** Handle according to established industrial hygiene and safety practices.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Granular.
<b>Color:</b>	Not available.
<b>Odor:</b>	Not available.
<b>Odor Threshold:</b>	Not available.
<b>Physical State:</b>	Solid.
<b>pH:</b>	Not available.

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<b>Viscosity:</b>	Not available.
<b>Freezing Point:</b>	Not available.
<b>Boiling Point:</b>	Not available.
<b>Flash Point:</b>	Not combustible.
<b>Evaporation Rate:</b>	Not available.
<b>Lower Flammability Limit:</b>	Not available.
<b>Upper Flammability Limit:</b>	Not available.
<b>Vapor Pressure:</b>	Not available.
<b>Vapor Density:</b>	Not available.
<b>Specific Gravity:</b>	Not available.
<b>Solubility in Water:</b>	Not available.
<b>Coefficient of Water/Oil Distribution:</b>	Not available.
<b>Auto-ignition Temperature:</b>	Not available.
<b>Percent Volatile, wt. %:</b>	Not available.
<b>VOC content, wt. %:</b>	Not available.

## Section 10: STABILITY AND REACTIVITY

**Stability:** Stable under normal storage conditions.

**Conditions of Reactivity:** Heat. Incompatible materials.

**Incompatible Materials:** Strong oxidizers, nitrites, inorganic chlorides, chlorites and perchlorates, strong alkalis, strong acids, bromine trifluoride or trichloride, potassium dichromate and sulfuric acid, hot nitric acid, sodium and magnesium metals.

**Hazardous Decomposition Products:** May include, and are not limited to: oxides of carbon, oxides of nitrogen, ammonia, biuret, cyanide compounds, phosphorous oxides, fluorides, sulfur dioxide, sulfur oxide gas and metal fume.

**Possibility of Hazardous Reactions:** No dangerous reaction known under conditions of normal use. Sodium hypochlorite or calcium hypochlorite may react with urea to form nitrogen trichloride which explodes spontaneously in air. Contact with high pH or alkaline materials (e.g., sodium hypochlorite) may cause diammonium phosphate to emit ammonia. Decomposes on heating above melting point producing toxic ammonia gas. At high temperatures sulfur can react with hydrocarbons to form hydrogen sulfide gas in the absence of air.

## Section 11: TOXICOLOGY INFORMATION

### EFFECTS OF ACUTE EXPOSURE

#### Component Analysis

Ingredient	LD <sub>50</sub> (oral)	LC <sub>50</sub>
Diammonium phosphate	6500 mg/kg, rat	Not available.
Urea	8471 mg/kg, rat	Not available.
Potassium chloride	2600 mg/kg, rat	Not available.
Ferric oxide	> 10000 mg/kg, rat	Not available.
Ferrous sulphate	237 mg/kg, rat	Not available.
Zinc oxide	> 5000 mg/kg, rat	2500 mg/m <sup>3</sup> , mouse
Zinc sulfate	500 mg/kg, rat	Not available.

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Calcium oxide	500 mg/kg, rat	Not available.
Silica, amorphous, fumed	5000 mg/kg, rat	> 200000 mg/m <sup>3</sup> 1hr, rat
Sulfur, elemental	> 3000 mg/kg, rat	> 9.23 mg/L 4hr, rat
Bentonite	> 5000 mg/kg, rat	Not available.
Magnesium oxide	Not available.	Not available.

- Eye:** May cause serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
- Skin:** May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
- Ingestion:** May be harmful if swallowed. May cause stomach distress, nausea or vomiting.
- Inhalation:** Dust may cause respiratory tract irritation. Symptoms may include coughing, sore throat, difficulty breathing.

## EFFECTS OF CHRONIC EXPOSURE

**Target Organs:** Not available.

**Carcinogenicity:** Hazardous by OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Diammonium phosphate	Not listed.
Urea	Not listed.
Potassium chloride	Not listed.
Ferric oxide	G-A4, I-3
Ferrous sulphate	Not listed.
Zinc oxide	Not listed.
Zinc sulfate	Not listed.
Calcium oxide	Not listed.
Silica, amorphous, fumed	I-3
Sulfur, elemental	Not listed.
Bentonite	Not listed.
Magnesium oxide	G-A4

\* See Section 15 for more information.

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity:** May cause long-term adverse effects in the aquatic environment.

**Persistence / Degradability:** Not available.

**Bioaccumulation / Accumulation:** Not available.

**Mobility in Environment:** Not available.

## Section 13: DISPOSAL CONSIDERATIONS

### Disposal Instructions:

This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

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## Section 14: TRANSPORTATION INFORMATION

### DOT Classification

Not regulated

## Section 15: REGULATORY INFORMATION

### Federal Regulations

**US:** MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200).

### SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Diammonium phosphate	Not listed.	Not listed.	Not listed.	Not listed.
Urea	Not listed.	Not listed.	Not listed.	Not listed.
Potassium chloride	Not listed.	Not listed.	Not listed.	Not listed.
Ferric oxide	Not listed.	Not listed.	Not listed.	Not listed.
Ferrous sulphate	Not listed.	Not listed.	1,000	Not listed.
Zinc oxide	Not listed.	Not listed.	Not listed.	Not listed.
Zinc sulfate	Not listed.	Not listed.	1,000	313c
Calcium oxide	Not listed.	Not listed.	Not listed.	Not listed.
Silica, amorphous, fumed	Not listed.	Not listed.	Not listed.	Not listed.
Sulfur, elemental	Not listed.	Not listed.	Not listed.	Not listed.
Bentonite	Not listed.	Not listed.	Not listed.	Not listed.
Magnesium oxide	Not listed.	Not listed.	Not listed.	Not listed.

### State Regulations

#### California Proposition 65:

This product contains a chemical or chemicals known to the State of California to cause cancer.

### Global Inventories

Ingredient	USA TSCA
Diammonium phosphate	Yes.
Urea	Yes.
Potassium chloride	Yes.
Ferric oxide	Yes.
Ferrous sulphate	Yes.
Zinc oxide	Yes.
Zinc sulfate	Yes.
Calcium oxide	Yes.
Silica, amorphous, fumed	Yes.
Sulfur, elemental	Yes.
Bentonite	Yes.
Magnesium oxide	Yes.

### HMS - Hazardous Materials Identification System

Health - 1\*

Flammability - 1

Physical Hazard - 0

PPE - B

### NFPA - National Fire Protection Association:

Health - 1

Fire - 1

Reactivity - 0

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

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## SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

**OSHA (O)** Occupational Safety and Health Administration.

**ACGIH (G)** American Conference of Governmental Industrial Hygienists.

A1 - Confirmed human carcinogen.

A2 - Suspected human carcinogen.

A3 - Animal carcinogen.

A4 - Not classifiable as a human carcinogen.

A5 - Not suspected as a human carcinogen.

**IARC (I)** International Agency for Research on Cancer.

1 - The agent (mixture) is carcinogenic to humans.

2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.

3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.

4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

**NTP (N)** National Toxicology Program.

1 - Known to be carcinogens.

2 - Reasonably anticipated to be carcinogens.

## Section 16: OTHER INFORMATION

### Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

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