

PHT 0-8-0 NUTRIENT SPRAY 1% Zn 3% Fe

Safety Data Sheet

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

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : PHT 0-8-0 NUTRIENT SPRAY 1% Zn 3% Fe
Product code : M77636

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

JR Simplot Company
Boise, ID 83707
T 1-208-336-2110

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Met. Corr. 1 H290
Skin Corr. 1B H314
Aquatic Acute 3 H402
Aquatic Chronic 2 H411

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

GHS09

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage
H402 - Harmful to aquatic life
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

P234 - Keep only in original container
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash ... thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P330 + P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303 + P361 + P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304 + P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
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/doctor/...
P321 - Specific treatment (see ... on this label)
P363 - Wash contaminated clothing before reuse
P390 - Absorb spillage to prevent material damage
P391 - Collect spillage
P405 - Store locked up
P406 - Store in corrosive resistant/... container with a resistant inner liner
P501 - Dispose of contents/container to ...

2.3. Other hazards

No additional information available

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2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

| Name | Product identifier | % | Classification (GHS-US) |
|--------------------------------|--------------------|---|---|
| Water | (CAS No) 7732-18-5 | | Not classified |
| iron(II) sulfate, heptahydrate | (CAS No) 7782-63-0 | | Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Aquatic Acute 2, H401 |
| phosphoric acid | (CAS No) 7664-38-2 | | Met. Corr. 1, H290 Skin Corr. 1B, H314 |
| citric acid | (CAS No) 77-92-9 | | Skin Irrit. 2, H315 Eye Irrit. 2A, H319 |
| zinc sulfate | (CAS No) 7733-02-0 | | Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

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 : Assure fresh air breathing. 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 immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. 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. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

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

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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 vapor.

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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| phosphoric acid (7664-38-2) | | |
|-----------------------------|---------------------------------|---------------------|
| USA ACGIH | ACGIH TWA (mg/m ³) | 1 mg/m ³ |
| USA ACGIH | ACGIH STEL (mg/m ³) | 3 mg/m ³ |

| iron(II) sulfate, heptahydrate (7782-63-0) | | |
|--|--------------------------------|---------------------|
| USA ACGIH | ACGIH TWA (mg/m ³) | 1 mg/m ³ |

8.2. Exposure controls

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
Color : Colorless
Odor : characteristic
Odor threshold : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : No data available
Density : 9.996 lbs/gal

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| | |
|----------------------|---|
| Solubility | : Water: Solubility in water of component(s) of the mixture : •: •: > 54 g/100ml •: 59 g/100ml •: 42 g/100ml |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosive limits | : 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 : Not classified

| phosphoric acid (7664-38-2) | |
|---|------------------------------------|
| LD50 oral rat | 4400 mg/kg (Rat) |
| ATE US (oral) | 4400.00000000 mg/kg body weight |
| citric acid (77-92-9) | |
| LD50 oral rat | 3000 mg/kg (Rat; Literature study) |
| ATE US (oral) | 3000.00000000 mg/kg body weight |
| iron(II) sulfate, heptahydrate (7782-63-0) | |
| LD50 oral rat | 1480 mg/kg (Rat) |
| ATE US (oral) | 1480.00000000 mg/kg body weight |
| zinc sulfate (7733-02-0) | |
| LD50 oral rat | 1000 - 2000 mg/kg (Rat) |
| ATE US (oral) | 1000.00000000 mg/kg body weight |

| | |
|-----------------------------------|--|
| Skin corrosion/irritation | : Causes severe skin burns and eye damage. |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified Based on available data, the classification criteria are not met |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified Based on available data, the classification criteria are not met |

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| | |
|---|--|
| Specific target organ toxicity (single exposure) | : Not classified |
| Specific target organ toxicity (repeated exposure) | : Not classified Based on available data, the classification criteria are not met |
| Aspiration hazard | : Not classified Based on available data, the classification criteria are not met |
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |

SECTION 12: Ecological information

12.1. Toxicity

| phosphoric acid (7664-38-2) | |
|---|--|
| LC50 fish 1 | 138 mg/l (96 h; Pisces; Pure substance) |
| LC50 other aquatic organisms 1 | 240 mg/l (96 h; Protozoa; Pure substance) |
| LC50 fish 2 | 100 - 1000 mg/l (Pisces; Pure substance) |
| LC50 other aquatic organisms 2 | 100 - 1000 mg/l (Pure substance) |
| TLM fish 1 | 138 ppm (24 h; Gambusia affinis; Pure substance) |
| Threshold limit other aquatic organisms 1 | 240 mg/l (96 h; Protozoa; Pure substance) |
| Threshold limit other aquatic organisms 2 | 100 - 1000, Pure substance |

| citric acid (77-92-9) | |
|-------------------------|---|
| LC50 fish 1 | 2600 mg/l (48 h; Leuciscus idus; pH = 7) |
| EC50 Daphnia 1 | 120 mg/l (72 h; Daphnia magna; pH < 7) |
| LC50 fish 2 | 1516 mg/l (96 h; Lepomis macrochirus) |
| EC50 Daphnia 2 | 85 mg/l (Daphnia magna) |
| Threshold limit algae 1 | 80 mg/l (192 h; Microcystis aeruginosa; Reproduction) |
| Threshold limit algae 2 | 640 mg/l (168 h; Scenedesmus quadricauda) |

| iron(II) sulfate, heptahydrate (7782-63-0) | |
|--|--|
| LC50 fish 1 | 925 mg/l (96 h; Poecilia reticulata) |
| EC50 Daphnia 1 | 7.2 mg/l (48 h; Daphnia magna; Metal ion) |
| LC50 fish 2 | > 200 mg/l (48 h; Leuciscus idus) |
| EC50 Daphnia 2 | 152 mg/l (48 h; Daphnia magna; Anhydrous form) |

| 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) |

12.2. Persistence and degradability

| PHT 0-8-0 NUTRIENT SPRAY 1% Zn 3% Fe | |
|--------------------------------------|------------------|
| Persistence and degradability | Not established. |

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

| phosphoric acid (7664-38-2) | |
|---------------------------------|---|
| Persistence and degradability | Biodegradability: not applicable. No (test) data on mobility of the components of the mixture available. Not established. |
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |
| BOD (% of ThOD) | Not applicable |

| citric acid (77-92-9) | |
|-------------------------------|---|
| Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil. Not established. |

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| citric acid (77-92-9) | |
|---------------------------------|-------------------------------------|
| Biochemical oxygen demand (BOD) | 0.420 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 0.728 g O ₂ /g substance |
| ThOD | 0.686 g O ₂ /g substance |
| BOD (% of ThOD) | (20 day(s)) 0.89 |

| iron(II) sulfate, heptahydrate (7782-63-0) | |
|---|--|
| Persistence and degradability | Biodegradability in water: no data available. Biodegradability in soil: no data available. Adsorbs into the soil. 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 |

12.3. Bioaccumulative potential

| PHT 0-8-0 NUTRIENT SPRAY 1% Zn 3% Fe | |
|---|------------------|
| Bioaccumulative potential | Not established. |

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

| phosphoric acid (7664-38-2) | |
|------------------------------------|---|
| Log Pow | -0.77 (Estimated value) |
| Bioaccumulative potential | Bioaccumulation: not applicable. Not established. |

| citric acid (77-92-9) | |
|------------------------------|---|
| Log Pow | -1.72 (Experimental value) |
| Bioaccumulative potential | Bioaccumulation: not applicable. Not established. |

| iron(II) sulfate, heptahydrate (7782-63-0) | |
|---|---------------------------------------|
| Bioaccumulative potential | Not bioaccumulative. Not established. |

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

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

| | |
|------------------------------|--|
| Effect on ozone layer | : No additional information available |
| Effect on the global warming | : No known ecological damage caused by this product. |
| Other information | : Avoid release to the environment. |

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--------------------------------|---|
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. |
| Ecology - waste materials | : Avoid release to the environment. |

SECTION 14: Transport information

In accordance with DOT
Not regulated for transport

Additional information

| | |
|-------------------|---|
| Other information | : No supplementary information available. |
|-------------------|---|

ADR

| | |
|--------------------------------|---|
| Transport document description | : |
|--------------------------------|---|

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Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

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Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory except for:

| | | |
|--------------------------------|------------------|--------|
| iron(II) sulfate, heptahydrate | CAS No 7782-63-0 | 15.00% |
|--------------------------------|------------------|--------|

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

phosphoric acid (7664-38-2)

Not listed on SARA Section 313 (Specific toxic chemical listings)

| | |
|--|---------|
| RQ (Reportable quantity, section 304 of EPA's List of Lists) : | 5000 lb |
|--|---------|

iron(II) sulfate, heptahydrate (7782-63-0)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Not listed on SARA Section 313 (Specific toxic chemical listings)

| | |
|--|---------|
| RQ (Reportable quantity, section 304 of EPA's List of Lists) : | 1000 lb |
|--|---------|

zinc sulfate (7733-02-0)

Listed on United States SARA Section 313

| | |
|--|---------|
| RQ (Reportable quantity, section 304 of EPA's List of Lists) : | 1000 lb |
|--|---------|

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

phosphoric acid (7664-38-2)

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, heptahydrate (7782-63-0)

U.S. - Pennsylvania - RTK (Right to Know) List

zinc sulfate (7733-02-0)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List

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zinc sulfate (7733-02-0)

U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Data sources :
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-phrases: see section 16:

| | |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment - Acute Hazard Category 1 |
| Aquatic Acute 2 | Hazardous to the aquatic environment - Acute Hazard Category 2 |
| Aquatic Acute 3 | Hazardous to the aquatic environment - Acute Hazard Category 3 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment - Chronic Hazard Category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment - Chronic Hazard Category 2 |
| Eye Dam. 1 | Serious eye damage/eye irritation Category 1 |
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| Met. Corr. 1 | Corrosive to metals Category 1 |
| Skin Corr. 1B | Skin corrosion/irritation Category 1B |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| H290 | May be corrosive to metals |
| H302 | Harmful if swallowed |
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H400 | Very toxic to aquatic life |
| H401 | Toxic to aquatic life |
| H402 | Harmful to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |
| H411 | Toxic to aquatic life with long lasting effects |

SDS US (GHS HazCom 2012)

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