

**Safety Data Sheet (SDS)**

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Printing date 04/10/2015

Reviewed on 04/10/2015

**1 Identification**

- **Product identifier**
- **Trade name:** 19-4-9-180-FS
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Product description** PC12 Fertilizers
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Florikan ESA, LLC  
6801 Energy Ct.  
Suite 100  
Sarasota, FL. 34240  
ph: 941-379-4048 ext 332  
Fax: 941-377-3633  
Email product info: Doug Cabe; dcabe@florikan.com
- **Emergency telephone number:** Chemtrec 800-424-9300

[www.Florikan.com](http://www.Florikan.com)**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2B H320 Causes eye irritation.

- **Additional information:** Dust can cause skin and eye irritation.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Warning

- **Hazard statements**

Causes skin and eye irritation.

Suspected of causing cancer.

- **Precautionary statements**

Wear protective gloves.

Wash thoroughly after handling.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

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IF exposed or concerned: Get medical advice/attention.  
If skin irritation occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
If on skin: Wash with plenty of water.  
Take off contaminated clothing and wash it before reuse.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Unknown acute toxicity:**

9.5 percent of the mixture consists of ingredient(s) of unknown toxicity.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMS-ratings (scale 0 - 4)**



· **Hazard(s) not otherwise classified (HNOC):** None known

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous Components:**

|                                     |                                                                                                                               |        |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------|
| CAS: 57-13-6<br>RTECS: YR 6250000   | Urea                                                                                                                          | 5-10%  |
| CAS: 6484-52-2<br>RTECS: BR9050000  | Ammonium Nitrate<br>⚠ Ox. Sol. 1, H271; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335                           | 5-10%  |
| CAS: 7487-88-9<br>RTECS: OM 4500000 | Magnesium Sulphate<br>⚠ STOT SE 3, H335                                                                                       | 2-12%  |
| CAS: 1309-48-4                      | Magnesium Oxide<br>⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335                                                | ≤ 2.5% |
| CAS: 7720-78-7<br>RTECS: NO 8510000 | iron(II) sulfate<br>⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319                                            | ≤ 2.5% |
| CAS: 7722-76-1                      | Ammonium phosphate monobasic<br>⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320                                   | ≤ 2.5% |
| CAS: 14807-96-6                     | Talc<br>⚠ Carc. 2, H351; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320                      | ≤ 2.5% |
| CAS: 10034-96-5<br>RTECS: OP0893500 | Manganese(II) Sulfate Monohydrate<br>⚠ STOT RE 2, H373; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335; ⚠ Aquatic Acute 2, H401 | ≤ 2.5% |

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|                                     |                                                                                                                                                |        |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| CAS: 7758-99-8<br>RTECS: GL 8800000 | Copper Sulfate Pentahydrate<br>⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319 | ≤ 2.5% |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------|

### 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** In case of unconsciousness, place patient securely on side position for transportation.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation occurs, consult a doctor.
- **After eye contact:**  
Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:**  
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose of the collected material according to regulations.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

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### 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**

· **Components with occupational exposure limits:**

#### 57-13-6 Urea

WEEL Long-term value: 10 mg/m<sup>3</sup>

#### 1309-48-4 Magnesium Oxide

PEL Long-term value: 15\* mg/m<sup>3</sup>  
fume; \*total particulate

TLV Long-term value: 10\* mg/m<sup>3</sup>  
\*as inhalable fraction

#### 7720-78-7 iron(II) sulfate

REL Long-term value: 1 mg/m<sup>3</sup>  
as Fe

TLV Long-term value: 1 mg/m<sup>3</sup>  
as Fe

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Protection of hands:**



Protective gloves

· **Eye protection:**



Tightly sealed goggles

### 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:**

Granulate

**Color:**

Whitish

· **Odor:**

Odorless

· **Odor threshold:**

Not determined.

· **pH-value:**

Not applicable.

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- **Change in condition**
  - Melting point/Melting range:** Not determined.
  - Boiling point/Boiling range:** 210 °C (410 °F)
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.
- **Ignition temperature:**
  - Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower:** Not determined.
  - Upper:** Not determined.
- **Vapor pressure:** Not applicable.
- **Density:**
  - Relative density** Not determined.
  - Vapor density** Not applicable.
  - Evaporation rate** Not applicable.
- **Solubility in / Miscibility with**
  - Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic:** Not applicable.
  - Kinematic:** Not applicable.
- **Solvent content:**
  - Organic solvents:** 0.0 %
  - Solids content:** 100.0 %
- **Other information** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

#### 57-13-6 Urea

|      |      |                  |
|------|------|------------------|
| Oral | LD50 | 8471 mg/kg (rat) |
|------|------|------------------|

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|                                              |               |                        |
|----------------------------------------------|---------------|------------------------|
| <b>6484-52-2 Ammonium Nitrate</b>            |               |                        |
| Oral                                         | LD50          | 2217 mg/kg (rat)       |
| <b>7487-88-9 Magnesium Sulphate</b>          |               |                        |
| Oral                                         | LD50          | >2000 mg/kg (rat)      |
| Inhalative                                   | LC50/4 h      | >2000 mg/l (rabbit)    |
|                                              | LC50/96 hours | 2820 mg/l (Pimephales) |
| <b>7720-78-7 iron(II) sulfate</b>            |               |                        |
| Oral                                         | LD50          | 1520 mg/kg (mouse)     |
| <b>7758-99-8 Copper Sulfate Pentahydrate</b> |               |                        |
| Oral                                         | LD50          | 300 mg/kg (rat)        |

• **Primary irritant effect:**

• **on the skin:** Irritant to skin and mucous membranes.

• **on the eye:**

Irritating effect.

Causes serious eye irritation.

• **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

• **Carcinogenic categories**

• **IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to humans

Group 2A - Probably carcinogenic to humans

Group 2B - Possibly carcinogenic to humans

Group 3 - Not classifiable as to its carcinogenicity to humans

Group 4 - Probably not carcinogenic to humans

|            |      |    |
|------------|------|----|
| 14807-96-6 | Talc | 2B |
|------------|------|----|

• **NTP (National Toxicology Program)**

None of the ingredients are listed.

• **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

## 12 Ecological information

• **Toxicity**

• **Aquatic toxicity:**

**57-13-6 Urea**

EC50 >10000 mg/l (daphnia)

**7487-88-9 Magnesium Sulphate**

EC50 2700 mg/l (Green algae)

343.56 mg/l (Water flea)

• **Persistence and degradability** No further relevant information available.

• **Behavior in environmental systems:**

• **Bioaccumulative potential** No further relevant information available.

• **Mobility in soil** No further relevant information available.

• **Additional ecological information:**

• **General notes:** Not known to be hazardous to water.

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- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es)**
- **DOT, ADR, IMDG, IATA**
- **Class** Non-Regulated Material
- **Packing group**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

#### · **Section 355 (extremely hazardous substances):**

|           |                  |
|-----------|------------------|
| 7720-78-7 | iron(II) sulfate |
|-----------|------------------|

#### · **Section 313 (Specific toxic chemical listings):**

|            |                                   |
|------------|-----------------------------------|
| 6484-52-2  | Ammonium Nitrate                  |
| 7757-79-1  | Potassium Nitrate                 |
| 11129-60-5 | Manganese oxide                   |
| 10034-96-5 | Manganese(II) Sulfate Monohydrate |
| 7758-99-8  | Copper Sulfate Pentahydrate       |
| 7733-02-0  | Zinc Sulphate (anhydrous)         |
| 1314-13-2  | zinc oxide                        |

#### · **TSCA (Toxic Substances Control Act):**

|           |                   |
|-----------|-------------------|
| 7778-80-5 | Potassium Sulfate |
| 57-13-6   | Urea              |
| 6484-52-2 | Ammonium Nitrate  |
| 7757-79-1 | Potassium Nitrate |

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|            |                              |
|------------|------------------------------|
| 7487-88-9  | Magnesium Sulphate           |
| 1317-61-9  | Iron Oxide                   |
| 1309-48-4  | Magnesium Oxide              |
| 7720-78-7  | iron(II) sulfate             |
| 7722-76-1  | Ammonium phosphate monobasic |
| 14807-96-6 | Talc                         |
| 1332-58-7  | Kaolin                       |
| 25791-96-2 | Poly(oxypropylene) triol     |
| 7757-93-9  | Calcium Phosphate, dibasic   |
| 7758-99-8  | Copper Sulfate Pentahydrate  |
| 7733-02-0  | Zinc Sulphate (anhydrous)    |

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

|            |                                   |          |
|------------|-----------------------------------|----------|
| 57-13-6    | Urea                              | II       |
| 11129-60-5 | Manganese oxide                   | D        |
| 10034-96-5 | Manganese(II) Sulfate Monohydrate | D        |
| 7733-02-0  | Zinc Sulphate (anhydrous)         | D, I, II |
| 1314-13-2  | zinc oxide                        | D, I, II |
| 10043-35-3 | boric acid                        | I (oral) |

· **TLV (Threshold Limit Value established by ACGIH)**

|            |                 |         |
|------------|-----------------|---------|
| 1309-48-4  | Magnesium Oxide | A4      |
| 14807-96-6 | Talc            | A4      |
| 1332-58-7  | Kaolin          | 2 mg/m3 |
| 10043-35-3 | boric acid      | A4      |

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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### · Hazard pictograms



GHS07 GHS08

### · Signal word Warning

### · Hazard statements

Causes skin and eye irritation.

Suspected of causing cancer.

### · Precautionary statements

Wear protective gloves.

Wash thoroughly after handling.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

IF exposed or concerned: Get medical advice/attention.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

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

### · National regulations:

The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

### · State Right to Know

|                                     |                                                                                                     |        |
|-------------------------------------|-----------------------------------------------------------------------------------------------------|--------|
| CAS: 7778-80-5<br>RTECS: TT5900000  | Potassium Sulfate                                                                                   | 60-90% |
| CAS: 57-13-6<br>RTECS: YR 6250000   | Urea                                                                                                | 5-10%  |
| CAS: 6484-52-2<br>RTECS: BR9050000  | Ammonium Nitrate<br>⚠ Ox. Sol. 1, H271; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335 | 5-10%  |
|                                     | Polyurethane elastomer                                                                              | 5-10%  |
| CAS: 7757-79-1<br>RTECS: TT 3700000 | Potassium Nitrate<br>⚠ Ox. Sol. 2, H272                                                             | 2-12%  |
| CAS: 7487-88-9<br>RTECS: OM 4500000 | Magnesium Sulphate<br>⚠ STOT SE 3, H335                                                             | 2-12%  |
| All ingredients are listed.         |                                                                                                     |        |

### · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## 16 Other information

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The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision** 04/10/2015 / -

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
Ox. Sol. 1: Oxidising Solids, Hazard Category 1  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2  
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A  
Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B  
Carc. 2: Carcinogenicity, Hazard Category 2  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3  
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2  
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1  
Aquatic Acute 2: Hazardous to the aquatic environment - AcuteHazard, Category 2  
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

· **\* Data compared to the previous version altered.**

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