

## Safety Data Sheet (SDS)

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

Issue date 06/19/2015

Reviewed on 06/19/2015

### 1 Identification

- **Product identifier**
- **Trade name:** 12-4-11-140
- **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  
801 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**  
Eye Irrit. 2B      H320 Causes eye irritation.  
Aquatic Chronic 3   H412 Harmful to aquatic life with long lasting effects.
- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** Non-Regulated Material
- **Signal word** Warning
- **Hazard statements**  
Causes eye irritation.  
Harmful to aquatic life with long lasting effects.
- **Precautionary statements**  
Avoid release to the environment.  
Wash thoroughly after handling.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Unknown acute toxicity:**  
34.1 percent of the mixture consists of ingredient(s) of unknown toxicity.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

|            |   |                |
|------------|---|----------------|
| HEALTH     | 1 | Health = 1     |
| FIRE       | 0 | Fire = 0       |
| REACTIVITY | 0 | Reactivity = 0 |

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

(Contd. on page 2)

## Safety Data Sheet (SDS)

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

Issue date 06/19/2015

Reviewed on 06/19/2015

Trade name: 12-4-11-100

### \* 3 Composition/information on ingredients

• **Chemical characterization: Mixtures**

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

• **Dangerous Components:**

|                                     |                                                                                                                   |        |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------|
| CAS: 10124-37-5                     | Calcium Nitrate                                                                                                   | 25-50% |
|                                     | ☠ Ox. Sol. 2, H272; ⚠ Eye Irrit. 2A, H319                                                                         |        |
| CAS: 7487-88-9<br>RTECS: OM 4500000 | Magnesium Sulphate                                                                                                | 15-35% |
|                                     | ⚠ STOT SE 3, H335                                                                                                 |        |
| CAS: 7720-78-7<br>RTECS: NO 8510000 | iron(II) sulfate                                                                                                  | ≤ 2.5% |
|                                     | ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319                                                    |        |
| CAS: 10034-96-5<br>RTECS: OP0893500 | Manganese(II) Sulfate Monohydrate                                                                                 | ≤ 2.5% |
|                                     | ☠ STOT RE 2, H373; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335; ⚠ Aquatic Acute 2, H401                          |        |
| CAS: 7758-99-8<br>RTECS: GL 8800000 | Copper Sulfate Pentahydrate                                                                                       | ≤ 2.5% |
|                                     | ⚠ Aquatic Acute 1, H400; ⚠ Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319 |        |
| CAS: 7733-02-0                      | Zinc Sulphate (anhydrous)                                                                                         | ≤ 2.5% |
|                                     | ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; ⚠ Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302                      |        |

### 4 First-aid measures

• **Description of first aid measures**

• **After inhalation:** Supply fresh air; consult doctor in case of complaints.

• **After skin contact:** Generally the product does not irritate the skin.

• **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:**

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

(Contd. on page 3)

## Safety Data Sheet (SDS)

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

Issue date 06/19/2015

Reviewed on 06/19/2015

**Trade name: 12-4-11-140**

- **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.

### \* 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:**

#### **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.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:** Not required.
- **Eye protection:**



Tightly sealed goggles

(Contd. on page 4)

## Safety Data Sheet (SDS)

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

Issue date 06/19/2015

Reviewed on 06/19/2015

Trade name: 12-4-11-100

### \* 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.

##### · Change in condition

|                              |                   |
|------------------------------|-------------------|
| Melting point/Melting range: | Not determined.   |
| Boiling point/Boiling range: | 1689 °C (3072 °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: Soluble.

· 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.

(Contd. on page 5)

## Safety Data Sheet (SDS)

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

Issue date 06/19/2015

Reviewed on 06/19/2015

Trade name: 12-4-11-140

- **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:**

##### **10124-37-5 Calcium Nitrate**

|        |      |                        |
|--------|------|------------------------|
| Oral   | LD50 | 3900 mg/kg mg/kg (rat) |
| Dermal | LD50 | >2000 mg/kg (rat)      |

##### **7487-88-9 Magnesium Sulphate**

|            |               |                        |
|------------|---------------|------------------------|
| Oral       | LD50          | >2000 mg/kg (rat)      |
| Inhalative | LC50/4 h      | >2000 mg/l (rabbit)    |
|            | LC50/96 hours | 2820 mg/l (Pimephales) |

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

|      |      |                    |
|------|------|--------------------|
| Oral | LD50 | 1520 mg/kg (mouse) |
|------|------|--------------------|

##### **7758-99-8 Copper Sulfate Pentahydrate**

|      |      |                 |
|------|------|-----------------|
| Oral | LD50 | 300 mg/kg (rat) |
|------|------|-----------------|

- **Primary irritant effect:**
- **on the skin:** No irritating effect.
- **on the eye:** Irritating effect.
- **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)**

None of the ingredients are listed.

##### · **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:**  
Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

##### **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.

(Contd. on page 6)

## Safety Data Sheet (SDS)

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

Issue date 06/19/2015

Reviewed on 06/19/2015

**Trade name: 12-4-11-100**

- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:** Harmful to aquatic organisms
- **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, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es)**
- **DOT, ADR, ADN, 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):**

|            |                                   |
|------------|-----------------------------------|
| 10124-37-5 | Calcium Nitrate                   |
| 10034-96-5 | Manganese(II) Sulfate Monohydrate |
| 7758-99-8  | Copper Sulfate Pentahydrate       |
| 7733-02-0  | Zinc Sulphate (anhydrous)         |

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

|            |                    |
|------------|--------------------|
| 7778-80-5  | Potassium Sulfate  |
| 10124-37-5 | Calcium Nitrate    |
| 7487-88-9  | Magnesium Sulphate |

(Contd. on page 7)

## Safety Data Sheet (SDS)

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

Issue date 06/19/2015

Reviewed on 06/19/2015

**Trade name: 12-4-11-140**

|            |                             |
|------------|-----------------------------|
| 7447-40-7  | Potassium Chloride          |
| 7720-78-7  | iron(II) sulfate            |
| 25791-96-2 | Poly(oxypropylene) triol    |
| 1332-58-7  | Kaolin                      |
| 15708-41-5 | EDTA feric sodium complex   |
| 7758-99-8  | Copper Sulfate Pentahydrate |
| 7733-02-0  | Zinc Sulphate (anhydrous)   |
| 7647-14-5  | Sodium Chloride             |
| 7631-95-0  | Sodium Molybdate            |

· **California 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)**

|            |                                   |          |
|------------|-----------------------------------|----------|
| 10034-96-5 | Manganese(II) Sulfate Monohydrate | D        |
| 7733-02-0  | Zinc Sulphate (anhydrous)         | D, I, II |

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

|           |        |                     |
|-----------|--------|---------------------|
| 1332-58-7 | Kaolin | 2 mg/m <sup>3</sup> |
|-----------|--------|---------------------|

· **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).

· **Hazard pictograms** Non-Regulated Material

· **Signal word** Warning

· **Hazard statements**

Causes eye irritation.

Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

Avoid release to the environment.

Wash thoroughly after handling.

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

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

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

· **National regulations:**

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

(Contd. on page 8)

## Safety Data Sheet (SDS)

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

Issue date 06/19/2015

Reviewed on 06/19/2015

Trade name: 12-4-11-100

| State Right to Know                 |                                                                |        |
|-------------------------------------|----------------------------------------------------------------|--------|
| CAS: 7778-80-5<br>RTECS: TT5900000  | Potassium Sulfate                                              | 25-50% |
| CAS: 10124-37-5                     | Calcium Nitrate                                                | 25-50% |
|                                     | ⚠ Ox. Sol. 2, H272; ⚠ Eye Irrit. 2A, H319                      |        |
| CAS: 7487-88-9<br>RTECS: OM 4500000 | Magnesium Sulphate                                             | 15-35% |
|                                     | ⚠ STOT SE 3, H335                                              |        |
| CAS: 7447-40-7                      | Potassium Chloride                                             | 2-12%  |
|                                     | Polyurethane elastomer                                         | 2-12%  |
| CAS: 7720-78-7<br>RTECS: NO 8510000 | iron(II) sulfate                                               | ≤ 2.5% |
|                                     | ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319 |        |
| All ingredients are listed.         |                                                                |        |

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

### 16 Other information

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 06/19/2015 / 1

#### 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  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Ox. Sol. 2: Oxidising Solids, Hazard Category 2  
 Acute Tox. 4: Acute toxicity, Hazard Category 4  
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1  
 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  
 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  
 Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

\* Data compared to the previous version altered.

SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106