

## Safety Data Sheet (SDS)

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

Printing date 03/17/2015

Reviewed on 03/17/2015

### 1 Identification

- **Product identifier**
- **Trade name:** 13-4-9-360-CIT
- **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

### \* 2 Hazard(s) identification

- **Classification of the substance or mixture**  
 The product does not need classification according to OSHA HazCom Standard 29 CFR paragraph (d) of §1910.1200(g) and GHS Rev 03.
- **Label elements**
- **GHS label elements** Non-Regulated Material
- **Hazard pictograms** Non-Regulated Material
- **Signal word** Non-Regulated Material
- **Hazard statements** Non-Regulated Material
- **Unknown acute toxicity:**  
 7.1 percent of the mixture consists of ingredient(s) of unknown toxicity.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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



- **Other hazards** None known

### \* 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

#### • **Dangerous Components:**

|                   |                                           |       |
|-------------------|-------------------------------------------|-------|
| CAS: 7487-88-9    | Magnesium Sulphate                        | 5-10% |
| RTECS: OM 4500000 | ⚠ STOT SE 3, H335                         |       |
| CAS: 10124-37-5   | Calcium Nitrate                           | 2-12% |
|                   | ⚠ Ox. Sol. 2, H272; ⚠ Eye Irrit. 2A, H319 |       |

(Contd. on page 2)

## Safety Data Sheet (SDS)

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

Printing date 03/17/2015

Reviewed on 03/17/2015

**Trade name: 13-4-9-360-CIT**

|                                     |                                                                                                                                                |        |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| CAS: 7783-28-0<br>RTECS: TB 9375000 | Diammonium phosphate<br>⚠ Skin Irrit. 2, H315; Eye Irrit. 2B, H320                                                                             | ≤ 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: 10034-96-5<br>RTECS: OP0893500 | Manganese(II) Sulfate Monohydrate<br>⚠ STOT RE 2, H373; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335; H401                                     | ≤ 2.5% |
| 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**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** If skin irritation occurs, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several 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:** No special measures required.
- **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 measures required.
- **Information about protection against explosions and fires:** No special measures required.

(Contd. on page 3)

## Safety Data Sheet (SDS)

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

Printing date 03/17/2015

Reviewed on 03/17/2015

**Trade name: 13-4-9-360-CIT**

- **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:** None.
- **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 were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** No special measures required.
- **Breathing equipment:** Not required.
- **Protection of hands:** Not required.
- **Material of gloves** Not required.
- **Penetration time of glove material** Not applicable.
- **Eye protection:** Not required.

### 9 Physical and chemical properties

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

##### · **General Information**

##### · **Appearance:**

**Form:** Granulate

**Color:** Light grey

· **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.

(Contd. on page 4)

## Safety Data Sheet (SDS)

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

Printing date 03/17/2015

Reviewed on 03/17/2015

Trade name: 13-4-9-360-CIT

- **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 %
- **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:**

#### 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) |

#### 10124-37-5 Calcium Nitrate

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

#### 7783-28-0 Diammonium phosphate

|        |      |                   |
|--------|------|-------------------|
| Oral   | LD50 | >5000 mg/kg (rat) |
| Dermal | LD50 | >5000 mg/kg (rat) |

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

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

(Contd. on page 5)

## Safety Data Sheet (SDS)

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

Printing date 03/17/2015

Reviewed on 03/17/2015

**Trade name: 13-4-9-360-CIT**

• **Primary irritant effect:**

• **on the skin:** No irritating effect.

• **on the eye:** No irritating effect.

• **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

• **Carcinogenic categories**

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

None of the ingredients are listed.

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

• **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:**

**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.

• **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:**

Small quantities can be disposed of with household waste.

Recycle or dispose with household trash.

• **Uncleaned packagings:**

• **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 6)

## Safety Data Sheet (SDS)

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

Printing date 03/17/2015

Reviewed on 03/17/2015

Trade name: 13-4-9-360-CIT

### 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

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

7487-88-9 Magnesium Sulphate

10124-37-5 Calcium Nitrate

7783-28-0 Diammonium phosphate

7720-78-7 iron(II) sulfate

1317-61-9 Iron Oxide

1309-48-4 Magnesium Oxide

1332-58-7 Kaolin

1319-33-1 Boron

25791-96-2 Poly(oxypropylene) triol

7758-99-8 Copper Sulfate Pentahydrate

15708-41-5 EDTA feric sodium complex

7733-02-0 Zinc Sulphate (anhydrous)

7631-95-0 Sodium Molybdate

1314-13-2 zinc oxide

(Contd. on page 7)

## Safety Data Sheet (SDS)

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

Printing date 03/17/2015

Reviewed on 03/17/2015

**Trade name: 13-4-9-360-CIT**

· **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)**

|            |                                   |          |
|------------|-----------------------------------|----------|
| 1319-33-1  | Boron                             | I        |
| 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 |

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

|           |                 |         |
|-----------|-----------------|---------|
| 1309-48-4 | Magnesium Oxide | A4      |
| 1332-58-7 | Kaolin          | 2 mg/m3 |

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

None of the ingredients are listed.

· **GHS label elements** Non-Regulated Material

· **Hazard pictograms** Non-Regulated Material

· **Signal word** Non-Regulated Material

· **Hazard statements** Non-Regulated Material

· **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: 7487-88-9<br>RTECS: OM 4500000 | Magnesium Sulphate                                             | 5-10%  |
|                                     | ⚠ STOT SE 3, H335                                              |        |
|                                     | Polyurethane elastomer                                         | 2-12%  |
| CAS: 10124-37-5                     | Calcium Nitrate                                                | 2-12%  |
|                                     | ⚠ Ox. Sol. 2, H272; ⚠ Eye Irrit. 2A, H319                      |        |
| CAS: 7783-28-0<br>RTECS: TB 9375000 | Diammonium phosphate                                           | ≤ 2.5% |
|                                     | ⚠ Skin Irrit. 2, H315; Eye Irrit. 2B, H320                     |        |
| 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.

(Contd. on page 8)

**Safety Data Sheet (SDS)**

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

Printing date 03/17/2015

Reviewed on 03/17/2015

**Trade name: 13-4-9-360-CIT****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** 03/17/2015 / 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  
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 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 - Acute Hazard, Category 1  
: Hazardous to the aquatic environment - Acute Hazard, 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.**

SDS created by MSDS Authoring Services    [www.msdsauthoring.com](http://www.msdsauthoring.com)    (877) 204-9106