

## Safety Data Sheet (SDS)

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

Issue date 07/27/2015

Reviewed on 07/27/2015

### 1 Identification

- **Product identifier**
- **Trade name:** 18-5-12-140-NV
- **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 www.Florikan.com  
 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

### 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:**  
 14.7 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: consisting of the following components.
- **Dangerous Components:**

CAS: 7704-34-9	Sulfur	≤ 2.5%
	⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320; Combustible Dust	
CAS: 7487-88-9 RTECS: OM 4500000	Magnesium Sulphate	≤ 2.5%
	⚠ STOT SE 3, H335	

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CAS: 1309-48-4	Magnesium Oxide ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	≤ 2.5%
CAS: 7720-78-7 RTECS: NO 8510000	iron(II) sulfate ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	≤ 2.5%
CAS: 10034-96-5 RTECS: OP0893500	Manganese(II) Sulfate Monohydrate ⚠ STOT RE 2, H373; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H335; ⚠ Aquatic Acute 2, H401	≤ 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:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **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 measures required.
- **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:** None.

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- **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:**

<b>Components with occupational exposure limits:</b>	
<b>7727-37-9 Nitrogen</b>	
TLV	withdrawn TLV, see App. F; simple asphyxiant
<b>1309-48-4 Magnesium Oxide</b>	
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
<b>7720-78-7 iron(II) sulfate</b>	
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:** 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:**

<b>Form:</b>	Granulate
<b>Color:</b>	Whitish
<b>Odor:</b>	Slight
<b>Odor threshold:</b>	Not determined.
<b>pH-value:</b>	Not applicable.
- **Change in condition**

<b>Melting point/Melting range:</b>	Not determined.
<b>Boiling point/Boiling range:</b>	1689 °C (3072 °F)
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.
- **Ignition temperature:**

<b>Decomposition temperature:</b>	Not determined.
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- **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 @ 20 °C (68 °F):** 1 g/cm<sup>3</sup> (8.345 lbs/gal)
- **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.
- **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:**

<b>LD/LC50 values that are relevant for classification:</b>		
<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)

- **Primary irritant effect:**
- **On the skin:** No irritating effect.
- **On the eye:** No irritating effect.

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· **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.

· **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:**

Do not allow undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.

· **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.

· **Uncleaned packagings:**

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

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

· **UN-Number:**

· **DOT, IMDG, IATA**

· **ADR**

Non-Regulated Material

Non-Regulated Material

Not Regulated

· **UN proper shipping name:**

· **DOT, ADR, IMDG, IATA**

Non-Regulated Material

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- **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":** Non-Regulated Material

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

· <b>Section 355 (extremely hazardous substances):</b>	
7720-78-7	iron(II) sulfate
· <b>Section 313 (Specific toxic chemical listings):</b>	
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
· <b>TSCA (Toxic Substances Control Act):</b>	
7778-80-5	Potassium Sulfate
7727-37-9	Nitrogen
7704-34-9	Sulfur
7487-88-9	Magnesium Sulphate
1317-61-9	Iron Oxide
1309-48-4	Magnesium Oxide
7720-78-7	iron(II) sulfate
1332-58-7	Kaolin
7439-89-6	Iron
7758-99-8	Copper Sulfate Pentahydrate
7733-02-0	Zinc Sulphate (anhydrous)
1314-13-2	Zinc Oxide
7631-95-0	Sodium Molybdate
· <b>California Proposition 65:</b>	
· <b>Chemicals known to cause cancer:</b>	
None of the ingredients are listed.	
· <b>Chemicals known to cause reproductive toxicity for females:</b>	
None of the ingredients are listed.	
· <b>Chemicals known to cause reproductive toxicity for males:</b>	
None of the ingredients are listed.	

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<ul style="list-style-type: none"> <li>• <b>Chemicals known to cause developmental toxicity:</b></li> </ul>		
None of the ingredients are listed.		
<ul style="list-style-type: none"> <li>• <b>Carcinogenic categories:</b></li> </ul>		
<ul style="list-style-type: none"> <li>• <b>EPA (Environmental Protection Agency):</b></li> </ul>		
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
<ul style="list-style-type: none"> <li>• <b>TLV (Threshold Limit Value established by ACGIH):</b></li> </ul>		
1309-48-4	Magnesium Oxide	A4
1332-58-7	Kaolin	2 mg/m3
<ul style="list-style-type: none"> <li>• <b>NIOSH-Ca (National Institute for Occupational Safety and Health):</b></li> </ul>		
None of the ingredients are listed.		
<ul style="list-style-type: none"> <li>• <b>GHS label elements</b> Non-Regulated Material</li> <li>• <b>Hazard pictograms:</b> Non-Regulated Material</li> <li>• <b>Signal word:</b> Non-Regulated Material</li> <li>• <b>Hazard statements:</b> Non-Regulated Material</li> </ul>		
<ul style="list-style-type: none"> <li>• <b>National regulations:</b></li> </ul>		
The product is subject to be classified according with the latest version of the regulations on hazardous substances.		
<ul style="list-style-type: none"> <li>• <b>State Right to Know:</b></li> </ul>		
CAS: 7778-80-5 RTECS: TT5900000	Potassium Sulfate	70-90%
	Polyurethane elastomer	5-10%
CAS: 7727-37-9 RTECS: QW 9700000	Nitrogen	2-12%
	⚠ Press. Gas, H280; Simple Asphyxiant	
	Soluble Potash (K <sub>2</sub> O)	≤ 2.5%
CAS: 7704-34-9	Sulfur	≤ 2.5%
	⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320; Combustible Dust	
CAS: 7487-88-9 RTECS: OM 4500000	Magnesium Sulphate	≤ 2.5%
	⚠ STOT SE 3, H335	
All ingredients are listed.		
<ul style="list-style-type: none"> <li>• <b>Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.</li> </ul>		

**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:** 07/27/2015 / -

- **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

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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  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Irrit. 2: Skin corrosion/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 2: Hazardous to the aquatic environment - Acute Hazard, Category 2  
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

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

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