

Safety Data Sheet (SDS)

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

Issue date 05/05/2015

Reviewed on 05/05/2015

1 Identification

- **Product identifier**
- **Trade name:** 8-2-12-180-LND
- **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**



GHS08 Health hazard

Carc. 1A H350 May cause cancer.

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**



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Quartz (SiO₂)
- **Hazard statements**
May cause cancer.
Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
Wear protective gloves.
Avoid release to the environment.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Unknown acute toxicity:**
41.6 percent of the mixture consists of ingredient(s) of unknown toxicity.

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- **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: 14977-38-8	Sulfate of Potash Magnesia	25-50%
	⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	
CAS: 7439-96-5 RTECS: OO 9275000	Manganese	2-12%
	⚠ Pyr. Sol. 1, H250; Water-react. 1, H260	
CAS: 7487-88-9 RTECS: OM 4500000	Magnesium Sulphate	2-12%
	⚠ STOT SE 3, H335	
CAS: 1309-48-4	Magnesium Oxide	2-12%
	⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
CAS: 7720-78-7 RTECS: NO 8510000	iron(II) sulfate	2-12%
	⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	
CAS: 7439-89-6 RTECS: NO 4565500	Iron	≤ 2.5%
	⚠ Flam. Sol. 2, H228; ⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320; Combustible Dust	
CAS: 10034-96-5 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: 14808-60-7 RTECS: VV 7330000	Quartz (SiO ₂)	≤ 2.5%
	⚠ Carc. 1A, H350; STOT RE 1, H372; ⚠ Acute Tox. 4, H332; STOT SE 3, H335; Eye Irrit. 2B, H320	
CAS: 7758-99-8 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	
CAS: 1314-13-2 RTECS: ZH 4810000	Zinc Oxide	≤ 2.5%
	⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

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Trade name: 8-2-12**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 several minutes under running water.
If eye irritation occurs, 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:**
CO₂, 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.
- **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:** 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.

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: Components with occupational exposure limits:	
14977-38-8 Sulfate of Potash Magnesia	
TLV	Short-term value: 10 mg/m ³ Long-term value: 15 mg/m ³
7439-96-5 Manganese	
PEL	Ceiling limit value: 5 mg/m ³ as Mn
REL	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ fume, as Mn
TLV	Long-term value: 0.02* 0.1* mg/m ³ as Mn; *respirable **inhalable fraction
1309-48-4 Magnesium Oxide	
PEL	Long-term value: 15* mg/m ³ fume; *total particulate
TLV	Long-term value: 10* mg/m ³ *as inhalable fraction
7720-78-7 iron(II) sulfate	
REL	Long-term value: 1 mg/m ³ as Fe
TLV	Long-term value: 1 mg/m ³ as Fe
14808-60-7 Quartz (SiO₂)	
PEL	see Quartz listing
REL	Long-term value: 0.05* mg/m ³ *respirable dust; See Pocket Guide App. A
TLV	Long-term value: 0.025* mg/m ³ *as respirable fraction

• **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:** Wash hands before breaks and at the end of work.

• **Breathing equipment:** Not required.

• **Protection of hands:** Not required.

• **Eye protection:** Not required.

9 Physical and chemical properties

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

• **General Information**

• **Appearance:**

Form:

Granulate

Color:

Grey

• **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:** 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.
- **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:**

7439-96-5 Manganese

Oral	LD50	9000 mg/kg (rat)
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Trade name: 8-2-12

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)
7439-89-6 Iron		
Oral	LD50	7500 mg/kg (rat)
14808-60-7 Quartz (SiO₂)		
Inhalative	LC50/96 hours	1033 mg/l (Trout)
7758-99-8 Copper Sulfate Pentahydrate		
Oral	LD50	300 mg/kg (rat)
1314-13-2 Zinc Oxide		
Oral	LD50	> 5000 mg/kg (rat)
• Primary irritant effect: • on the skin: No irritating effect. • on the eye: No irritating effect. • Additional toxicological information: • 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		
14808-60-7	Quartz (SiO ₂)	1
• NTP (National Toxicology Program)		
14808-60-7	Quartz (SiO ₂)	K
• 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.		
7439-96-5 Manganese		
EC50	40 mg/l (Water flea)	
7487-88-9 Magnesium Sulphate		
EC50	2700 mg/l (Green algae)	
	343.56 mg/l (Water flea)	
14808-60-7 Quartz (SiO₂)		
EC50	218 mg/l (Green algae)	
• Persistence and degradability No further relevant information available.		

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Trade name: 8-2-12

- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxical 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, 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
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· **Section 313 (Specific toxic chemical listings):**

7439-96-5	Manganese
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

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· TSCA (Toxic Substances Control Act):		
7778-80-5	Potassium Sulfate	
7439-96-5	Manganese	
7487-88-9	Magnesium Sulphate	
1317-61-9	Iron Oxide	
1309-48-4	Magnesium Oxide	
7720-78-7	iron(II) sulfate	
7439-89-6	Iron	
25791-96-2	Poly(oxypropylene) triol	
1332-58-7	Kaolin	
1332-37-2	Iron oxide	
14808-60-7	Quartz (SiO ₂)	
7758-99-8	Copper Sulfate Pentahydrate	
1319-33-1	Boron	
7733-02-0	Zinc Sulphate (anhydrous)	
1314-13-2	Zinc Oxide	
· California Proposition 65		
· Chemicals known to cause cancer:		
14808-60-7	Quartz (SiO ₂)	
· 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)		
7439-96-5	Manganese	D
11129-60-5	Manganese oxide	D
10034-96-5	Manganese(II) Sulfate Monohydrate	D
1319-33-1	Boron	I
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/m ³
14808-60-7	Quartz (SiO ₂)	A2
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
14808-60-7	Quartz (SiO ₂)	
· GHS label elements		

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

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· Hazard pictograms



GHS08

· Signal word Danger

· Hazard-determining components of labeling:

Quartz (SiO₂)

· Hazard statements

May cause cancer.

Harmful to aquatic life with long lasting effects.

· Precautionary statements

Wear protective gloves.

Avoid release to the environment.

Obtain special instructions before use.

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

IF exposed or concerned: Get medical advice/attention.

Store locked up.

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.

· State Right to Know

CAS: 7778-80-5 RTECS: TT5900000	Potassium Sulfate	25-50%
CAS: 14977-38-8	Sulfate of Potash Magnesia	25-50%
	⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	
	Polyurethane elastomer	5-10%
CAS: 7439-96-5 RTECS: OO 9275000	Manganese	2-12%
	⚠ Pyr. Sol. 1, H250; Water-react. 1, H260	
CAS: 7487-88-9 RTECS: OM 4500000	Magnesium Sulphate	2-12%
	⚠ STOT SE 3, H335	
CAS: 1317-61-9	Iron Oxide	2-12%

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 05/05/2015 / -

· 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
Flam. Sol. 2: Flammable solids, Hazard Category 2
Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1
Water-react. 1: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 1

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
Carc. 1A: Carcinogenicity, Hazard Category 1A
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1
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.**

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