

Safety Data Sheet (SDS)

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

Issue date 03/08/2016

Reviewed on 03/08/2016

*** 1 Identification**

- **Product Identifier**
- **Trade name: 17-4-12-180-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 1-800-424-9300 or outside USA 1-703-527-3887

www.Florikan.com**2 Hazard(s) Identification**

- **Classification of the substance or mixture:**

~~GHS08~~ Health hazard

Carc. 1A H350 May cause cancer.

Repr. 1 H360 May damage fertility or the unborn child.

- **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:**
H350 May cause cancer.
H360 May damage fertility or the unborn child.
- **Precautionary statements:**
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Unknown acute toxicity:**
22.2 % of the mixture consists of component(s) of unknown toxicity.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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



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

3 Composition/Information on Ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture: consisting of non-regulated material.

· **Dangerous Components:**

CAS: 57-13-6 RTECS: YR 6250000	Urea	5-10%
CAS: 14977-38-8	Sulfate of Potash Magnesia	5-10%
	☞ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	
CAS: 14808-60-7 RTECS: VV 7330000	Quartz (SiO ₂)	2-12%
	☞ Carc. 1A, H350; STOT RE 1, H372; ☞ Acute Tox. 4, H332; STOT SE 3, H335; Eye Irrit. 2B, H320	
CAS: 7727-37-9 RTECS: QW 9700000	Nitrogen	2-12%
	☞ Press. Gas, H280; Simple Asphyxiant	
CAS: 7783-28-0 RTECS: TB 9375000	Diammonium phosphate	2-12%
	☞ Skin Irrit. 2, H315; Eye Irrit. 2B, H320	
CAS: 7704-34-9	Sulfur	≤ 2.5%
	☞ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320; Combustible Dust	
CAS: 1332-37-2	Iron oxide	≤ 2.5%
CAS: 1309-48-4	Magnesium Oxide	≤ 2.5%
	☞ Acute Tox. 4, H302	
CAS: 7720-78-7 RTECS: NO 8510000	iron(II) sulfate	≤ 2.5%
	☞ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319	
CAS: 12179-04-3	disodium tetraborate pentahydrate	≤ 2.5%
	☞ Repr. 1B, H360; Eye Irrit. 2B, H320	

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.
- **After swallowing:** If swallowed and symptoms occur, consult a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed:**
Quartz: Can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death; inhaled from occupational sources is classified as carcinogenic to humans. Some studies (Contd. on page 3)

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show in workers exposed to respirable quartz excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease, chronic bronchitis and emphysema.

· **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:** 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.

· **Control parameters:**

· **Components with occupational exposure limits:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

57-13-6 Urea

WEEL Long-term value: 10 mg/m³

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14808-60-7 Quartz (SiO₂)

- PEL see Quartz listing
- REL Long-term value: 0.05* mg/m³
*respirable dust; See Pocket Guide App. A
- TLV Long-term value: 0.025* mg/m³
*as respirable fraction

7727-37-9 Nitrogen

- TLV withdrawn TLV, see App. F; simple asphyxiant

1332-37-2 Iron oxide

- REL Long-term value: 1 mg/m³
as Fe
- TLV Long-term value: 1 mg/m³
as Fe

1309-48-4 Magnesium Oxide

- PEL Long-term value: 15* mg/m³
fume; *total particulate
- TLV Long-term value: 10* mg/m³
*as inhalable fraction

7720-78-7 iron(II) sulfate

- REL Long-term value: 1 mg/m³
as Fe
- TLV Long-term value: 1 mg/m³
as Fe

12179-04-3 disodium tetraborate pentahydrate

- REL Long-term value: 1 mg/m³
- TLV Short-term value: 6* mg/m³
Long-term value: 2* mg/m³
*as inhalable 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.
- **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:** Whitish
 - Odor:** Slight
 - Odor threshold:** Not determined.

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- **pH-value:** Not applicable.
- **Change in condition**
 - Melting point/Melting range:** Not determined.
 - Boiling point/Boiling range:** 1689 °C (3072 °F)
- **Flash point:** None
- **Flammability (solid, gaseous):** Not determined.
- **Ignition temperature:** Not determined
- **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:** 93.0 %
- **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:** Contact with fluorine, oxygen difluoride, and chlorine trifluoride will cause fire.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological Information

· **Information on toxicological effects:**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

7778-80-5 Potassium Sulfate

Oral	LD50	6600 mg/kg (rat)
Inhalative	LC50/96 hours	680 mg/l (Pimephales)

57-13-6 Urea

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

14808-60-7 Quartz (SiO₂)

Oral	LD50	> 22500 mg/kg (rat)
Inhalative	LC50/96 hours	1033 mg/l (Trout)

7783-28-0 Diammonium phosphate

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

1309-48-4 Magnesium Oxide

Oral	LD50	810 mg/kg (mouse)
------	------	-------------------

7720-78-7 iron(II) sulfate

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

12179-04-3 disodium tetraborate pentahydrate

Oral	LD50	3305 mg/kg (rat)
Inhalative	LC50/4 h	>2.0 mg/l (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):**

"In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicate dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled"

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- 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:**

57-13-6 Urea

EC50 >10000 mg/l (daphnia)

14808-60-7 Quartz (SiO₂)

EC50 218 mg/l (Green algae)

- **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:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.
- **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, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name:**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material

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- **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 MARPOL 73/78 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):**

- **Section 355 (extremely hazardous substances):**

7720-78-7 iron(II) sulfate

- **Section 313 (Specific toxic chemical listings):**

11129-60-5 Manganese oxide

1314-13-2 Zinc Oxide

1317-38-0 Cupric Oxide

- **TSCA (Toxic Substances Control Act):**

7778-80-5 Potassium Sulfate

57-13-6 Urea

14808-60-7 Quartz (SiO₂)

7727-37-9 Nitrogen

7783-28-0 Diammonium phosphate

25791-96-2 Poly(oxypropylene) triol

7704-34-9 Sulfur

1332-37-2 Iron oxide

1309-48-4 Magnesium Oxide

7720-78-7 iron(II) sulfate

1332-58-7 Kaolin

7439-89-6 Iron

16389-88-1 Dolomitic limestone

15708-41-5 EDTA feric sodium complex

8002-74-2 Paraffin Waxes

- **California Proposition 65:**

- **Chemicals known to cause cancer:**

14808-60-7 Quartz (SiO₂)

- **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.

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· Chemicals known to cause developmental toxicity:		
None of the ingredients are listed.		
· New Jersey Right-to-Know List:		
14808-60-7	Quartz (SiO ₂)	
7727-37-9	Nitrogen	
7704-34-9	Sulfur	
1309-48-4	Magnesium Oxide	
7720-78-7	iron(II) sulfate	
1332-58-7	Kaolin	
8002-74-2	Paraffin Waxes	
1314-13-2	Zinc Oxide	
· New Jersey Special Hazardous Substance List:		
14808-60-7	Quartz (SiO ₂)	CA
· Pennsylvania Special Hazardous Substance List:		
7720-78-7	iron(II) sulfate	E
1314-13-2	Zinc Oxide	E
· Carcinogenic categories:		
· EPA (Environmental Protection Agency):		
57-13-6	Urea	II
11129-60-5	Manganese oxide	D
12179-04-3	disodium tetraborate pentahydrate	I (oral)
1314-13-2	Zinc Oxide	D, I, II
· TLV (Threshold Limit Value established by ACGIH):		
14808-60-7	Quartz (SiO ₂)	A2
1309-48-4	Magnesium Oxide	A4
1332-58-7	Kaolin	2 mg/m ³
12179-04-3	disodium tetraborate pentahydrate	A4
· 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).

· **Hazard pictograms:**



GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**

Quartz (SiO₂)

· **Hazard statements:**

H350 May cause cancer.

H360 May damage fertility or the unborn child.

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Trade name: 17-4-12-180-CIT**· Precautionary statements:**

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P405 Store locked up.
- P501 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.

- 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:** 03/08/2016 / 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
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Press. Gas: Gases under pressure: Compressed gas
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
Carc. 1A: Carcinogenicity, Hazard Category 1A
Repr. 1: Reproductive toxicity, Hazard Category 1
Repr. 1B: Reproductive toxicity, Hazard Category 1B
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

- * Data compared to the previous version altered.**

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