

Safety Data Sheet (SDS)

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

Issue date 09/03/2015

Reviewed on 09/03/2015

* 1 Identification

- **Product identifier**
- **Trade name:** 18-2-14-180-CNF
- **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.

STOT RE 1 H372 Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

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.
Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.
Harmful to aquatic life with long lasting effects.
- **Precautionary statements:**
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid release to the environment.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
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.

Safety Data Sheet (SDS)

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

Issue date 09/03/2015

Reviewed on 09/03/2015

Trade name: 18-2-14-180-CNF

Get medical advice/attention if you feel unwell.

Store locked up.

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

· **Unknown acute toxicity:**

4.8 % of the mixture consists of component(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: 57-13-6 RTECS: YR 6250000	Urea	15-35%
CAS: 7487-88-9 RTECS: OM 4500000	Magnesium Sulphate ☞ STOT SE 3, H335	15-35%
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: 14808-60-7 RTECS: VV 7330000	Quartz (SiO ₂) ☞ Carc. 1A, H350; STOT RE 1, H372; ☞ Acute Tox. 4, H332; STOT SE 3, H335; Eye Irrit. 2B, H320	≤ 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%
CAS: 7758-99-8 RTECS: GL 8800000	Copper Sulfate Pentahydrate ☞ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ☞ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	≤ 2.5%
CAS: 7733-02-0	Zinc Sulphate (anhydrous) ☞ Eye Dam. 1, H318; ☞ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ☞ Acute Tox. 4, H302	≤ 2.5%

* 4 First-aid measures

· **Description of first aid measures:**

· **General information:**

Symptoms of poisoning may occur after several hours; therefore medical observation is advised for at least 48 hours after the accident.

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

(Contd. on page 3)

Safety Data Sheet (SDS)

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

Issue date 09/03/2015

Reviewed on 09/03/2015

Trade name: 18-2-14-180-CNF

- **After skin contact:**

Wash with soap and water.

If skin irritation occurs, consult a doctor.

- **After eye contact:** 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:**

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 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:**

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 contaminated material as waste according to section 13.

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.

(Contd. on page 4)

Safety Data Sheet (SDS)

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

Issue date 09/03/2015

Reviewed on 09/03/2015

Trade name: 18-2-14-180-CNF

* 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:**

57-13-6 Urea

WEEL Long-term value: 10 mg/m³

7720-78-7 iron(II) sulfate

REL Long-term value: 1 mg/m³
as Fe

TLV Long-term value: 1 mg/m³
as Fe

14808-60-7 Quartz (SiO₂)

PEL Long-term value: 0.1 mg/m³

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

· **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.

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.

· **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:** 0 °C (32 °F)

(Contd. on page 5)

Safety Data Sheet (SDS)

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

Issue date 09/03/2015

Reviewed on 09/03/2015

Trade name: 18-2-14-180-CNF

- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** 0.0 Vol %
 - Upper:** 0.0 Vol %
- **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:** Contact with fluorine, oxygen difluoride, and chlorine trifluoride will cause fire.
- **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:**

57-13-6 Urea

Oral	LD50	8471 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)
------	------	--------------------

(Contd. on page 6)

Safety Data Sheet (SDS)

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

Issue date 09/03/2015

Reviewed on 09/03/2015

Trade name: 18-2-14-180-CNF

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)

· **Primary irritant effect:**

· **On the skin:** No irritating effect.

· **On the eye:** No irritating effect.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

· **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

"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"

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.

57-13-6 Urea	
EC50	>10000 mg/l (daphnia)
7487-88-9 Magnesium Sulphate	
EC50	2700 mg/l (Green algae)
	343.56 mg/l (Water flea)

(Contd. on page 7)

Safety Data Sheet (SDS)

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

Issue date 09/03/2015

Reviewed on 09/03/2015

Trade name: 18-2-14-180-CNF

14808-60-7 Quartz (SiO ₂)
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.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
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:**
Observe all federal, state and local environmental regulations when disposing of this material.
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.
- **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
- **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

(Contd. on page 8)

Safety Data Sheet (SDS)

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

Issue date 09/03/2015

Reviewed on 09/03/2015

Trade name: 18-2-14-180-CNF

· Section 313 (Specific toxic chemical listings):		
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	
57-13-6	Urea	
7487-88-9	Magnesium Sulphate	
7720-78-7	iron(II) sulfate	
25791-96-2	Poly(oxypropylene) triol	
14808-60-7	Quartz (SiO ₂)	
1332-58-7	Kaolin	
15708-41-5	EDTA feric sodium complex	
7758-99-8	Copper Sulfate Pentahydrate	
7733-02-0	Zinc Sulphate (anhydrous)	
7631-95-0	Sodium Molybdate	
· 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):		
57-13-6	Urea	II
10034-96-5	Manganese(II) Sulfate Monohydrate	D
7733-02-0	Zinc Sulphate (anhydrous)	D, I, II
· TLV (Threshold Limit Value established by ACGIH):		
14808-60-7	Quartz (SiO ₂)	A2
1332-58-7	Kaolin	2 mg/m ³
· 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).

(Contd. on page 9)

Safety Data Sheet (SDS)

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

Issue date 09/03/2015

Reviewed on 09/03/2015

Trade name: 18-2-14-180-CNF

· **Hazard pictograms:**



GHS08

· **Signal word:** Danger

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

Quartz (SiO₂)

· **Hazard statements:**

May cause cancer.

Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

Harmful to aquatic life with long lasting effects.

· **Precautionary statements:**

Do not breathe dust/fume/gas/mist/vapors/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

Avoid release to the environment.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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.

Get medical advice/attention if you feel unwell.

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: 57-13-6 RTECS: YR 6250000	Urea	15-35%
CAS: 7487-88-9 RTECS: OM 4500000	Magnesium Sulphate	15-35%
	☞ STOT SE 3, H335	
	Polyurethane elastomer	2-12%
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: 25791-96-2	Poly(oxypropylene) triol	≤ 2.5%
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:** 09/03/2015 / 1

(Contd. on page 10)

Safety Data Sheet (SDS)

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

Issue date 09/03/2015

Reviewed on 09/03/2015

Trade name: 18-2-14-180-CNF

· **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
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.**

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