

Safety Data Sheet (SDS)

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

Issue date 03/30/2017

Reviewed on 03/30/2017

1 Identification

- **Product Identifier**
- **Trade name:** 23-3-10
- **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 34234
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:**
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:** Non-Regulated Material
- **Signal word:** Non-Regulated Material
- **Hazard statements:**
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements:**
P273 Avoid release to the environment.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Unknown acute toxicity:**
This value refers to knowledge of known, established toxicological or ecotoxicological values.
35.4 % of the mixture consists of component(s) of unknown toxicity.
- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
- **NFPA ratings (scale 0 - 4)**



The substance possesses oxidizing properties.

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

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

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

3 Composition/Information on Ingredients

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

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Dangerous Components:		
CAS: 57-13-6 RTECS: YR 6250000	Urea	25-50%
CAS: 7757-79-1 RTECS: TT 3700000	Potassium Nitrate ⚠ Ox. Sol. 3, H272	15-35%
CAS: 12125-02-9 RTECS: BP 4550000	Ammonium Chloride ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H302; Eye Irrit. 2A, H319	15-35%
CAS: 6484-52-2 RTECS: BR9050000	Ammonium Nitrate ⚠ Ox. Sol. 3, H272; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	15-35%
CAS: 16389-88-1	Dolomitic limestone ⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	15-35%
CAS: 8047-67-4	Iron saccharate	2-12%

Additional information:

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

4 First-Aid Measures

Description of first aid measures:

General information:

Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.

• **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation occurs, consult a doctor.

After eye contact:

If eye irritation occurs, consult a doctor.

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:** Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture:

During heating or in case of fire poisonous gases are produced.

Advice for firefighters:

Protective equipment:

Mouth respiratory protective device.

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:

Mount respiratory protective device.

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Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:** 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.

Ensure adequate ventilation.

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.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

57-13-6	Urea	30 mg/m3
7757-79-1	Potassium Nitrate	9 mg/m3
12125-02-9	Ammonium Chloride	20 mg/m3
6484-52-2	Ammonium Nitrate	6.7 mg/m3
7487-88-9	Magnesium Sulphate	20 mg/m3
7727-37-9	Nitrogen	7.96E+05 ppm
7783-20-2	Ammonium Sulfate	13 mg/m3

· **PAC-2:**

57-13-6	Urea	280 mg/m3
7757-79-1	Potassium Nitrate	100 mg/m3
12125-02-9	Ammonium Chloride	54 mg/m3
6484-52-2	Ammonium Nitrate	73 mg/m3
7487-88-9	Magnesium Sulphate	220 mg/m3
7727-37-9	Nitrogen	8.32E+05 ppm
7783-20-2	Ammonium Sulfate	140 mg/m3

· **PAC-3:**

57-13-6	Urea	1,700 mg/m3
7757-79-1	Potassium Nitrate	600 mg/m3
12125-02-9	Ammonium Chloride	330 mg/m3
6484-52-2	Ammonium Nitrate	440 mg/m3
7487-88-9	Magnesium Sulphate	1,300 mg/m3
7727-37-9	Nitrogen	8.69E+05 ppm
7783-20-2	Ammonium Sulfate	840 mg/m3

7 Handling and Storage

· **Handling**

· **Precautions for safe handling:** Prevent formation of dust.

· **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Keep protective respiratory device available.

· **Conditions for safe storage, including any incompatibilities:**

· **Storage**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

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- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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/m ³
12125-02-9 Ammonium Chloride	
REL	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³
TLV	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³
8047-67-4 Iron saccharate	
REL	Long-term value: 1 mg/m ³ as Fe
TLV	Long-term value: 1 mg/m ³ 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:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**



Protective gloves

- **Material of gloves:** Not applicable
- **Penetration time of glove material:** Not applicable.
- **Eye protection:**



Safety glasses

- **Limitation and supervision of exposure into the environment:**
Keep away from drains, surface and ground waters.
Avoid release into the environment.

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9 Physical and Chemical Properties**· Information on basic physical and chemical properties****· General Information****· Appearance:**

Form:	Granulate
Color:	Grey
Odor:	Slight
Odor threshold:	Not determined.

· pH-value: Not applicable.**· Change in condition**

Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	-195.8 °C (-320 °F)

· Flash point: None**· Flammability (solid, gaseous):** Contact with combustible material may cause fire.**· Ignition temperature:** Not applicable**· 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.
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· Partition coefficient (n-octanol/water): Not determined.**· Viscosity:**

Dynamic:	Not applicable.
Kinematic:	Not applicable.

· Solvent content:

Organic solvents:	0.0 %
Water:	0.2 %

· 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.

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- **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:**

57-13-6 Urea

Oral	LD50	8471 mg/kg (Rat)
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7757-79-1 Potassium Nitrate

Oral	LD50	3750 mg/kg (Rat)
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12125-02-9 Ammonium Chloride

Oral	LD50	1650 mg/kg (Rat)
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Inhalative	LC50/96 hours	3.98 mg/l (Trout)
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6484-52-2 Ammonium Nitrate

Oral	LD50	2217 mg/kg (Rat)
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- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **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

8047-67-4	Iron saccharate	3
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- **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:**
Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

57-13-6 Urea

EC50	>10000 mg/l (Daphnia)
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7757-79-1 Potassium Nitrate

EC50	226 mg/l (Water flea)
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- **Persistence and degradability:** No further relevant information available.

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- **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.

14 Transport Information

- **UN-Number:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR/ADN, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR/ADN, 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):**

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

None of the ingredients are listed.

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

7757-79-1	Potassium Nitrate
6484-52-2	Ammonium Nitrate
7783-20-2	Ammonium Sulfate

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

57-13-6	Urea
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7757-79-1	Potassium Nitrate
12125-02-9	Ammonium Chloride
6484-52-2	Ammonium Nitrate
16389-88-1	Dolomitic limestone
25791-96-2	Poly(oxypropylene) triol
7487-88-9	Magnesium Sulphate
7727-37-9	Nitrogen
7783-20-2	Ammonium Sulfate
7647-14-5	Sodium Chloride
7732-18-5	Water, distilled water, deionized water

· **California 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.

· **New Jersey Right-to-Know List:**

7757-79-1	Potassium Nitrate
12125-02-9	Ammonium Chloride
6484-52-2	Ammonium Nitrate
7727-37-9	Nitrogen

· **New Jersey Special Hazardous Substance List:**

6484-52-2	Ammonium Nitrate	R3
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· **Pennsylvania Right-to-Know List:**

7757-79-1	Potassium Nitrate
12125-02-9	Ammonium Chloride
6484-52-2	Ammonium Nitrate
7727-37-9	Nitrogen
7783-20-2	Ammonium Sulfate

· **Pennsylvania Special Hazardous Substance List:**

12125-02-9	Ammonium Chloride	E
6484-52-2	Ammonium Nitrate	E
7783-20-2	Ammonium Sulfate	E

· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**

57-13-6	Urea	II
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· **TLV (Threshold Limit Value established by ACGIH):**

None of the ingredients are listed.

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

None of the ingredients are listed.

· **GHS label elements**

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

· **Hazard pictograms:** Non-Regulated Material

· **Signal word:** Non-Regulated Material

· **Hazard statements:**

H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements:**

P273 Avoid release to the environment.

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:** 03/30/2017 / 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 and Health

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Ox. Sol. 3: Oxidizing solids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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

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