

Safety Data Sheet (SDS)

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

Issue date 09/04/2015

Reviewed on 09/04/2015

* 1 Identification

• Product identifier

• Trade name: 14-5-10

• 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. 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

• Classification of the substance or mixture:



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H335 May cause respiratory irritation.

Eye Irrit. 2B H320 Causes eye irritation.

• Label elements:

• GHS label elements

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

• Hazard pictograms:



Signal word: Warning

• Hazard-determining components of labeling:

Ammonium Nitrate

Sulfate of Potash Magnesia

Magnesium Sulphate

Ammonium phosphate monobasic

• Hazard statements:

Causes skin and eye irritation.

May cause respiratory irritation.

• Precautionary statements:

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves.

Wash thoroughly after handling.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

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IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

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

• **Unknown acute toxicity:**

33 % of the mixture consists of component(s) of unknown toxicity.

• **Classification system:**

• **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

• **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

• **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: 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: 14977-38-8	Sulfate of Potash Magnesia Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	15-35%
CAS: 7487-88-9 RTECS: OM 4500000	Magnesium Sulphate STOT SE 3, H335	5-10%
CAS: 7727-37-9 RTECS: QW 9700000	Nitrogen Press. Gas, H280; Simple Asphyxiant	5-10%
CAS: 7722-76-1	Ammonium phosphate monobasic Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	2-12%
CAS: 14807-96-6 RTECS: WW2710000	Talc (Mg3H2(SiO3)4) not containing asbestos or asbestiform fibres	≤ 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: 1309-48-4	Magnesium Oxide Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	≤ 2.5%

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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%

* 4 First-aid measures

- **Description of first aid measures:**
- **After inhalation:**
Consult a doctor for complaints.
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:**
Rinse opened eye for at least 15 minutes under running water. If symptoms persist, 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:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
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.

* 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.

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- **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:** No further relevant information available..
- **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:**

7727-37-9 Nitrogen

TLV withdrawn TLV, see App. F; simple asphyxiant

14807-96-6 Talc ($\text{Mg}_3\text{H}_2(\text{SiO}_3)_4$) not containing asbestos or asbestiform fibres

PEL Long-term value: 20 mppcf ppm
(containing <1% Quartz)

REL Long-term value: 2* mg/m³
*respirable dust

TLV Long-term value: 2* mg/m³
*as respirable fraction; E

7720-78-7 iron(II) sulfate

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

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

S Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/
the chemical mixture.

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Select glove material based on penetration times, rates of diffusion and degradation.

· **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material:**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· **Eye protection:**

R

Safety glasses

* 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:

-195 °C (-319 °F)

· **Flash point:**

None

· **Flammability (solid, gaseous):**

Not determined.

· **Ignition temperature:**

0 °C (32 °F)

· **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.

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- **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:**

6484-52-2 Ammonium Nitrate

Oral	LD50	2217 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)
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7758-99-8 Copper Sulfate Pentahydrate

Oral	LD50	300 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

14807-96-6	Talc (Mg3H2(SiO3)4) not containing asbestos or asbestiform fibres
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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:
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:
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:	Non-Regulated Material
· DOT, ADR, ADN, IMDG, IATA	
· UN proper shipping name:	Non-Regulated Material
· DOT, ADR, ADN, IMDG, IATA	
· 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.

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· 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):**

6484-52-2 Ammonium Nitrate

11129-60-5 Manganese oxide

10034-96-5 Manganese(II) Sulfate Monohydrate

7783-20-2 Ammonium Sulfate

7758-99-8 Copper Sulfate Pentahydrate

7733-02-0 Zinc Sulphate (anhydrous)

1314-13-2 Zinc Oxide

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

6484-52-2 Ammonium Nitrate

7778-80-5 Potassium Sulfate

7487-88-9 Magnesium Sulphate

7727-37-9 Nitrogen

7722-76-1 Ammonium phosphate monobasic

14807-96-6 Talc (Mg₃H₂(SiO₃)₄) not containing asbestos or asbestiform fibres

7720-78-7 iron(II) sulfate

1317-61-9 Iron Oxide

1309-48-4 Magnesium Oxide

60-00-4 edetic acid

7757-93-9 Calcium Phosphate, dibasic

57-13-6 Urea

7783-20-2 Ammonium Sulfate

1332-58-7 Kaolin

7758-99-8 Copper Sulfate Pentahydrate

· **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.

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· **Carcinogenic categories:**

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

11129-60-5	Manganese oxide	D
10034-96-5	Manganese(II) Sulfate Monohydrate	D
57-13-6	Urea	II
7733-02-0	Zinc Sulphate (anhydrous)	D, I, II
1314-13-2	Zinc Oxide	D, I, II
10043-35-3	Boric Acid	I (oral)

· **TLV (Threshold Limit Value established by ACGIH):**

14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄) not containing asbestos or asbestiform fibres	A4
1309-48-4	Magnesium Oxide	A4
1332-58-7	Kaolin	2 mg/m ³
10043-35-3	Boric Acid	A4

· **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:**



GHS07

· **Signal word:** Warning

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

Ammonium Nitrate
Sulfate of Potash Magnesia
Magnesium Sulphate
Ammonium phosphate monobasic

· **Hazard statements:**

Causes skin and eye irritation.
May cause respiratory irritation.

· **Precautionary statements:**

Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves.
Wash thoroughly after handling.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor if you feel unwell.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water.
Take off contaminated clothing and wash it before reuse.
Store locked up.

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Store in a well-ventilated place. Keep container tightly closed.

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: 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: 14977-38-8	Sulfate of Potash Magnesia ↪ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	15-35%
CAS: 7778-80-5 RTECS: TT5900000	Potassium Sulfate	15-35%
CAS: 7487-88-9 RTECS: OM 4500000	Magnesium Sulphate ↪ STOT SE 3, H335	5-10%
CAS: 7727-37-9 RTECS: QW 9700000	Nitrogen ↪ Press. Gas, H280; Simple Asphyxiant	5-10%
CAS: 7722-76-1	Ammonium phosphate monobasic ↪ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	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:** 09/04/2015 / -

• **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
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 Press. Gas:
Gases under pressure: Compressed gas Ox. Sol. 3:
Oxidising Solids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
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
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 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Acute 2: Hazardous to the aquatic environment - AcuteHazard, Category 2

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Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

. *** Data compared to the previous version altered.**SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106