

Safety Data Sheet (SDS)

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

Issue date 03/25/2020

Reviewed on 03/25/2020

1 Identification

- **Product Identifier**
- **Trade Name: 21-3-18-090**
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description:** Fertilizer
- **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

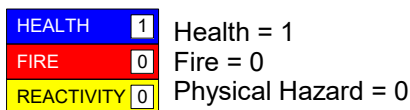
www.Florikan.com

2 Hazard(s) Identification

- **Classification of the substance or mixture:**
Eye Irrit. 2B H320 Causes eye irritation.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
- **Label elements:**
- **Hazard pictograms:** Non-Regulated Material
- **Signal word:** Warning
- **Hazard statements:**
H320 Causes eye irritation.
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements:**
P264 Wash thoroughly after handling.
P273 Avoid release to the environment.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
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.
18.5 % 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)**



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



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

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3 Composition/Information on Ingredients

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

· **Dangerous Components:**

CAS: 57-13-6 RTECS: YR 6250000	Urea	25-50%
CAS: 14977-38-8	Sulfate of Potash Magnesia ⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	2-12%
CAS: 7783-28-0 RTECS: TB 9375000	Diammonium phosphate ⚠ Skin Irrit. 2, H315; Eye Irrit. 2B, H320	2-12%
CAS: 7704-34-9	Sulfur ⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320; Combustible Dust	2-12%
CAS: 7785-87-7	Manganese Sulphate ⚠ STOT RE 2, H373; ⚠ Aquatic Chronic 2, H411	≤2.5%
CAS: 7446-19-7 RTECS: ZH 5300000	Zinc sulfate monohydrate ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	≤2.5%

· **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:** If symptoms persist, call a physician.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** 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.
If easy to do so, remove contact lenses if worn.
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:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information.
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters**
- **Special protective equipment for firefighters:**
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.

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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.
- **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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

57-13-6	Urea	30 mg/m ³
7783-28-0	Diammonium phosphate	20 mg/m ³
7785-87-7	Manganese Sulphate	8.2 mg/m ³

· PAC-2:

57-13-6	Urea	280 mg/m ³
7783-28-0	Diammonium phosphate	210 mg/m ³
7785-87-7	Manganese Sulphate	14 mg/m ³

· PAC-3:

57-13-6	Urea	1,700 mg/m ³
7783-28-0	Diammonium phosphate	1,300 mg/m ³
7785-87-7	Manganese Sulphate	430 mg/m ³

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:** 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/m³

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7785-87-7 Manganese Sulphate	
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 as Mn
TLV	Long-term value: 0.02* 0.1** mg/m ³ as Mn; *respirable **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.

· **Breathing equipment:** Not required.

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

· **Material of gloves:** Not applicable.

· **Penetration time of glove material:** Not applicable.

· **Eye protection:**



Tightly sealed goggles

· **Limitation and supervision of exposure into the environment:**

Keep away from drains, surface and ground waters.

Avoid release into the environment.

9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

Form:

Granulate

Color:

Grayish

· **Odor:**

Slight

· **Odor threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**

Melting point/Melting range:

Not determined.

Boiling point/Boiling range:

≥445 °C (≥833 °F)

· **Flash point:**

None

· **Flammability (solid, gaseous):**

Not determined.

· **Ignition temperature:**

≥260 °C (≥500 °F)

· **Decomposition temperature:**

Not determined.

· **Auto igniting:**

Product is not self-igniting.

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- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapor pressure:** Not applicable.
- **Density @ 20 °C (68 °F):** 1.7169 g/cm³ (14.3275 lbs/gal)
- **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:**
- **VOC content:** 0.00 %
- **Other information:** No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Product is 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:**
 - Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride.
- **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	8,471 mg/kg (Rat)
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7447-40-7 Potassium Chloride

Oral	LD50	2,600 mg/kg (Rat)
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7783-28-0 Diammonium phosphate

Oral	LD50	>5,000 mg/kg (Rat)
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Dermal	LD50	>5,000 mg/kg (Rat)
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7785-87-7 Manganese Sulphate

Oral	LD50	2,150 mg/kg (Rat)
------	------	-------------------

7446-19-7 Zinc sulfate monohydrate

Oral	LD50	2,150 mg/kg (Rat)
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· **Primary irritant effect:**

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

· **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):**

None of the ingredients are listed.

· **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 >10,000 mg/l (Daphnia)

· **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 undiluted product or product that has not been neutralized to reach ground water, water course or sewage system.

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.

Observe all federal, state and local environmental regulations when disposing of this material.

· **Uncleaned packaging**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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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, 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):**

7785-87-7 Manganese Sulphate

7446-19-7 Zinc sulfate monohydrate

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

57-13-6	Urea	ACTIVE
7447-40-7	Potassium Chloride	ACTIVE
7783-28-0	Diammonium phosphate	ACTIVE
7704-34-9	Sulfur	ACTIVE
7785-87-7	Manganese Sulphate	ACTIVE
25791-96-2	Poly(oxypropylene) triol	ACTIVE
1302-78-9	Bentonite	ACTIVE

· **Hazardous Air Pollutants**

7785-87-7 Manganese Sulphate

· **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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· New Jersey Right-to-Know List:		
7704-34-9	Sulfur	
· New Jersey Special Hazardous Substance List:		
None of the ingredients are listed.		
· Pennsylvania Right-to-Know List:		
7704-34-9	Sulfur	
· Pennsylvania Special Hazardous Substance List:		
None of the ingredients are listed.		
· Carcinogenic categories:		
· EPA (Environmental Protection Agency):		
57-13-6	Urea	II
7785-87-7	Manganese Sulphate	D
1319-33-1	Boron	I
7446-19-7	Zinc sulfate monohydrate	D, I, II
· TLV (Threshold Limit Value established by ACGIH):		
None of the ingredients are listed.		
· 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: Warning		
· Hazard statements:		
H320 Causes eye irritation.		
H412 Harmful to aquatic life with long lasting effects.		
· Precautionary statements:		
P264	Wash thoroughly after handling.	
P273	Avoid release to the environment.	
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.	
· National regulations:		
None of the 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 last revision/ revision number: 03/25/2020 / -

· 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

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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)
VOC: Volatile Organic Compounds (USA, EU)
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
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
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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