

Safety Data Sheet

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2024 and GHS Rev 07.

Date of issue: 01/14/2025

Reviewed on 01/14/2025

1 Identification

· **Product identifier**

· **Trade name:** Florikan CRF 17-5-11

· **Other means of identification**

· **Product Description:**

Polymer Coated Fertilizer



This product was developed in conjunction; and with assistance from NASA using cutting edge research, quality control and scientific methodology.

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

FLORIKAN E.S.A. LLC

2404 Commerce Court

Bowling Green, Florida 33834

(941) 379-4048

www.Florikan.com

· **Emergency telephone number:**

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

· **Classification of the substance or mixture**

The product is not classified, according to the Globally Harmonized System (GHS).

· **Label elements**

· **GHS label elements** Non-Regulated Material

· **Hazard pictograms** Non-Regulated Material

· **Signal word** Non-Regulated Material

· **Hazard statements** Non-Regulated Material

· **Unknown acute toxicity:**

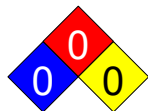
This value refers to knowledge of known, established toxicological or ecotoxicological values.

0 % of the mixture consists of component(s) of unknown toxicity.

· **Information pertaining to particular dangers for man and environment:**

· **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· **NFPA ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 0

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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· **Classification according to (d)(1)(ii) of § 1910.1200**

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

· **Hazards not otherwise classified**

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7704-34-9	sulfur ⚠ Skin irritation 2, H315	3–7%
CAS: 1314-56-3 RTECS: TH 3945000	Available Phosphate (P_2O_5) ⚠ Skin corrosion 1A, H314	≥5–≤7%
CAS: 6484-52-2	Ammonium Nitrate ⚠ Oxidizing solids 3, H272; ⚠ Skin irritation 2, H315; Eye irritation 2A, H319; Specific target organ toxicity (single exposure) 3, H335-H336	1–5%
CAS: 57-13-6 RTECS: YR 6250000	Urea	1–5%

· **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.

DERIVED FROM: Polymer Coated: Ammonium Nitrate, Ammonium Phosphate, Sulfate of Potash, Magnesium Sulfate, Iron EDTA, Manganese Sulfate, Sodium Borate, Sodium Molybdate, Zinc Sulfate

*The following nutrients have been coated to provide 17.6% Slow Release Nitrogen (N), 5.56% Slow Release Available Phosphate (P_2O_5), and 11.11% Slow Release Soluble Potash (K_2O), 1.39% Slow Release Magnesium (Mg), 0.03% Slow Release Boron (B), 0.32% Slow Release Iron (Fe), 6.48% Slow Release Sulfur (S), 0.13% Slow Release Manganese (Mn), 0.01% Slow Release Molybdenum (Mo), and 0.08% Slow Release Zinc (Zn)

4 First-aid measures

· **Description of first aid measures**

· **General information:** No special measures required.

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

· **After skin contact:**

Wash with soap and water.

If skin irritation occurs, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water.

If eye irritation occurs, consult a doctor.

· **After swallowing:** If swallowed and symptoms occur, consult a 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** Treat symptomatically.

* 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

Use fire fighting measures that suit the environment.

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** No further relevant information.

· **Special hazards arising from the substance or mixture** No further relevant information available.

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· **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:** Pick up mechanically.

· **Protective Action Criteria for Chemicals**

Protective Action Criteria (PACs) are essential components for planning and response to uncontrolled releases of hazardous chemicals.

· **PAC-1:**

PAC 1: Mild, transient health effects.

7757-79-1	Nitrate nitrogen	9 mg/m ³
1314-56-3	Available Phosphate (P ₂ O ₅)	1 mg/m ³
6484-52-2	Ammonium Nitrate	6.7 mg/m ³
57-13-6	Urea	30 mg/m ³
7487-88-9	Magnesium Sulphate	20 mg/m ³
7439-89-6	iron	3.2 mg/m ³
10034-96-5	Mangan(II)-sulfat-Monohydrat	9.2 mg/m ³
7733-02-0	Zinc Sulphate (anhydrous)	15 mg/m ³
7440-42-8	Boron	1.9 mg/m ³
7439-98-7	molybdenum	30 mg/m ³

· **PAC-2:**

PAC 2: Irreversible or other serious health effects that could impair the ability to take protective action.

7757-79-1	Nitrate nitrogen	100 mg/m ³
1314-56-3	Available Phosphate (P ₂ O ₅)	10 mg/m ³
6484-52-2	Ammonium Nitrate	73 mg/m ³
57-13-6	Urea	280 mg/m ³
7487-88-9	Magnesium Sulphate	220 mg/m ³
7439-89-6	iron	35 mg/m ³
10034-96-5	Mangan(II)-sulfat-Monohydrat	15 mg/m ³
7733-02-0	Zinc Sulphate (anhydrous)	97 mg/m ³
7440-42-8	Boron	21 mg/m ³
7439-98-7	molybdenum	330 mg/m ³

· **PAC-3:**

PAC 3: Life-threatening health effects.

7757-79-1	Nitrate nitrogen	600 mg/m ³
1314-56-3	Available Phosphate (P ₂ O ₅)	50 mg/m ³
6484-52-2	Ammonium Nitrate	440 mg/m ³
57-13-6	Urea	1,700 mg/m ³
7487-88-9	Magnesium Sulphate	1,300 mg/m ³
7439-89-6	iron	150 mg/m ³
10034-96-5	Mangan(II)-sulfat-Monohydrat	90 mg/m ³

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7733-02-0	Zinc Sulphate (anhydrous)	580 mg/m ³
7440-42-8	Boron	130 mg/m ³
7439-98-7	molybdenum	2,000 mg/m ³

· **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

· **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

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has 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

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

· **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 applicable.

· **Penetration time of glove material**

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

· **Eye protection:** Not required.

· **Limitation and supervision of exposure into the environment** None

* 9 Physical and chemical properties

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

· **General Information**

· **Physical state**

Solid

· **Color:**

Whitish

· **Odor:**

Light

· **Odor threshold:**

Not determined.

· **Melting point/Melting range:**

Undetermined.

· **Boiling point/Boiling range:**

Undetermined.

· **Flammability:**

Not determined.

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· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	Not determined.
· pH-value:	Not applicable.
· Viscosity:	
· Kinematic:	Not applicable.
· Dynamic:	Not applicable.
· Solubility in / Miscibility with	
· Water:	Soluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Vapor pressure:	Not applicable.
· Vapor pressure:	
· Density at 20 °C (68 °F):	1 g/cm ³ (8.345 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not applicable.
· Particle characteristics	Not determined.
· Other information	
· Appearance:	
· Form:	Granulate
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Solvent content:	
· VOC content:	0.00 %
· Solids content:	100.0 %
· Change in condition	
· Oxidizing properties	None

10 Stability and reactivity

- **Reactivity**
The product is stable under normal conditions.
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	2,217 mg/kg (rat)
57-13-6 Urea		
Oral	LD50	8,471 mg/kg (rat)

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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Interactive effects** No interactive effects between components are known.
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)
None of the ingredients is listed.

· NTP (National Toxicology Program)
None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

- **Alternative sources for toxicological information**
- No non-standard sources for toxicological information where used.

12 Ecological information

- **Toxicity**

· Aquatic toxicity:
57-13-6 Urea
EC50 >10,000 mg/kg (daphnia)

- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects**
- **Additional ecological information:**
- **General notes:**
- Water hazard class 3 (Self-assessment): extremely hazardous for water
- Do not allow product to reach ground water, water course or sewage system, even in small quantities.
- Danger to drinking water if even extremely small quantities leak into the ground.

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, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name**
- **DOT, IMDG, IATA** Non-Regulated Material

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- **Transport hazard class(es)**
- **DOT, ADN, IMDG, IATA**
- **Class** Non-Regulated Material
- **Packing group**
- **DOT, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **Special precautions for user** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Sara**

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

1314-56-3	Available Phosphate (P ₂ O ₅)
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· **Section 313 (Specific toxic chemical listings):**

7757-79-1	Nitrate nitrogen
6484-52-2	Ammonium Nitrate
10034-96-5	Mangan(II)-sulfat-Monohydrat
7733-02-0	Zinc Sulphate (anhydrous)

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

7447-40-7	potassium chloride	ACTIVE
7757-79-1	Nitrate nitrogen	ACTIVE
7704-34-9	sulfur	ACTIVE
1314-56-3	Available Phosphate (P ₂ O ₅)	ACTIVE
6484-52-2	Ammonium Nitrate	ACTIVE
57-13-6	Urea	ACTIVE
7732-18-5	water, distilled, conductivity or of similar purity	ACTIVE
7487-88-9	Magnesium Sulphate	ACTIVE
7439-89-6	iron	ACTIVE
7647-14-5	sodium chloride	ACTIVE
7733-02-0	Zinc Sulphate (anhydrous)	ACTIVE
7440-42-8	Boron	ACTIVE
7439-98-7	molybdenum	ACTIVE

· **Hazardous Air Pollutants**

10034-96-5	Mangan(II)-sulfat-Monohydrat
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· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

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· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	

· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	

· New Jersey Right-to-Know List:	
7757-79-1	Nitrate nitrogen
7704-34-9	sulfur
1314-56-3	Available Phosphate (P_2O_5)
6484-52-2	Ammonium Nitrate
7733-02-0	Zinc Sulphate (anhydrous)
7440-42-8	Boron
7439-98-7	molybdenum

· New Jersey Special Hazardous Substance List:		
1314-56-3	Available Phosphate (P_2O_5)	CO, R2
6484-52-2	Ammonium Nitrate	R3

· Pennsylvania Right-to-Know List:	
7757-79-1	Nitrate nitrogen
7704-34-9	sulfur
1314-56-3	Available Phosphate (P_2O_5)
6484-52-2	Ammonium Nitrate
7733-02-0	Zinc Sulphate (anhydrous)
7439-98-7	molybdenum

· Pennsylvania Special Hazardous Substance List:		
1314-56-3	Available Phosphate (P_2O_5)	E
6484-52-2	Ammonium Nitrate	E
7733-02-0	Zinc Sulphate (anhydrous)	E

· **Carcinogenic categories**

· EPA (Environmental Protection Agency)		
57-13-6	Urea	II
10034-96-5	Mangan(II)-sulfat-Monohydrat	D
7440-66-6	zinc powder -zinc dust (stabilized)	II
7733-02-0	Zinc Sulphate (anhydrous)	D, I, II
7440-42-8	Boron	I (oral)

· TLV (Threshold Limit Value)		
7439-98-7	molybdenum	A3

· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	

· **GHS label elements** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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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.

- **SDS created by:** Access GHS, LLC - 888-363-4870 - Team@access-ghs-sds.com
- **Date of previous version** 01/09/2025
- **Date of preparation** 01/14/2025
- **Abbreviations and acronyms:**
 - IMDG: International Maritime Code for Dangerous Goods
 - DOT: US Department of Transportation
 - IATA: International Air Transport Association
 - 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
 - TLV: Threshold Limit Value
 - PEL: Permissible Exposure Limit
 - REL: Recommended Exposure Limit
 - Oxidizing solids 3: Oxidizing solids – Category 3
 - Skin corrosion 1A: Skin corrosion/irritation – Category 1A
 - Skin irritation 2: Skin corrosion/irritation – Category 2
 - Eye irritation 2A: Serious eye damage/eye irritation – Category 2A
 - Specific target organ toxicity (single exposure) 3: Specific target organ toxicity (single exposure) – Category 3
- *** Data compared to the previous version altered.**