


**SECTION 1: Identification**

- 1.1. Product identifier  
Product Form : Liquid  
Product Name: : OptiStart/Five
  - 1.2. Recommended use / restrictions of use  
: Agricultural fertilizer. No restrictions.
  - 1.3. Details of the supplier of the data sheet  
: Winfield Solutions, LLC  
P.O. Box 64589  
St. Paul, MN 55164  
Tel 1-855-494-6343 (Non-Emergency)
  - 1.4. Emergency telephone number  
Medical emergency number : 1-877-424-7452 (24 hrs)
- FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, OR ACCIDENT, CALL: CHEMTREC 1-800-424-9300**

**SECTION 2: Hazards Identification**

- 2.1. Classification of the substance or mixture  
: Skin irritant (H315), eye irritant (H320)
- 2.2. Label elements  
Hazard pictograms  
 GHS07
- Signal word : Warning
- Hazard statements : H315 – Causes skin irritation  
H320 – Causes eye irritation
- Precautionary statements : P280 – Wear protective gloves/eye protection  
P305+P351 – If in eyes: Rinse cautiously with water for several minutes  
P337+P313 – If eye irritation persists: Get medical advice/attention
- 2.3. Other hazards  
: No additional hazards
- 2.4. Unknown acute toxicity  
: No data available

**SECTION 3: Composition/information on ingredients**

- 3.1. Substance  
: Not applicable
- 3.2. Mixture

Ingredient name	Product identifier (CAS No.)	%
Ammonium Polyphosphate	68333-79-9	30 - 35
Ammonium Thiosulfate	7783-18-8	15 - 20
Potassium Chloride (Muriate of Potash)	7447-40-7	8 - 10
Various micronutrients*	-	5 - 6
Water	7732-18-5	30 - 40

\*The specific chemical identity and concentrations have been withheld as a trade secret.

**SECTION 4: First aid measures**

## 4.1. Description of first aid measures

- First-aid measures after inhalation : Not considered to be an inhalation hazard.
- First-aid measures after skin contact : Wash with water and soap. If irritation persists, seek medical attention.
- First-aid measures after eye contact : Flush eyes with running water for at least 15 minutes. If irritation persists, seek medical attention.
- First-aid measures after ingestion : Give large amounts of water and induce vomiting. Call Poison Control Center or seek medical attention immediately.

## 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : None.
- Symptoms/injuries after skin contact : May cause slight skin irritation.
- Symptoms/injuries after eye contact : May cause eye irritation.

## 4.3. Indication of any immediate medical attention and special treatment needed

: No additional information available.

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**SECTION 5: Firefighting measures**

## 5.1. Extinguishing media

- Suitable extinguishing media : Foam, dry chemical, carbon dioxide, water fog.
- Unsuitable extinguishing media : Water spray.

## 5.2. Special hazards arising from the substance or mixture

: Product is classified as non-flammable. However, ammonia fumes may form from burning.

## 5.3. Advice for firefighters

- Firefighting instructions : None.
- Protection during firefighting : Wear positive pressure, self-contained breathing apparatus. Avoid fume inhalation.
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**SECTION 6: Accidental release measures**

## 6.1. Personal precautions, protective equipment, and emergency procedures

- Protective equipment : Wear gloves and cover skin. Use eye protection.
- Emergency procedures : None required.

## 6.2. Environmental precautions

: Prevent entry to sewers and public surface waters.

## 6.3. Methods and material for containment and cleaning up

- Clean-up methods : Contain spill and pump into containers. Collect residue with absorbent material. Store all spill materials in suitable containers for recycle/disposal.

## 6.4. Reference to other sections

: See Section 7 for safe handling information.  
See Section 8 for PPE information.  
See Section 13 for disposal information.

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**SECTION 7: Handling and storage**

7.1. Precautions for safe handling

Safe handling precautions : Avoid contact with skin and eyes. After handling product, remove clothing and laundry, and wash hands/exposed skin thoroughly with soap and water. Avoid breathing vapors. Avoid contamination of feed or foodstuffs.

Fire/explosion precautions : No special measures required.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Storage is suitable in vessels of following materials: high density polyethylene (HDPE), fiberglass, fiberglass reinforced plastic (FRP), stainless steel. Storage vessel must be able to accommodate the product density.

Incompatible materials : Slightly reactive with oxidizing agents, non-stainless steel metals, and alkalis.

7.3. Specific end use(s)

: No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

8.1. Control parameters

ACGIH Threshold Limit Value : Not established.

OSHA Permissible Exposure Limit : Not established.

8.2. Exposure controls

Appropriate engineering controls : No special requirements.

Personal protective equipment : Hand, skin, eye.

Hand protection : Wear protective gloves. Glove material: Any.

Eye protection : Safety goggles or face shield.

Skin and body protection : Wear long sleeved clothing and other suitable clothing to prevent skin exposure.

Respiratory protection : Not normally needed. Product considered a non-inhalation hazard.

**SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Physical state	: Liquid	Evaporation rate	: Not determined
Color	: Clear green	Flammability	: Non-flammable
Odor	: No apparent odor	Flash point	: Does not flash
Odor threshold	: No data available	Explosive limit (upper)	: No data available
Boiling point	: No data available	Explosive limit (lower)	: No data available
Melting point	: Not applicable	Auto ignition temp.	: No data available
Freezing point	: < 0° F	Decomposition temp.	: No data available
Vapor pressure	: No data available	Partition coefficient	: No data available
Vapor density	: No data available	Viscosity, kinematic	: No data available
pH	: 5.3 – 5.5	Viscosity, dynamic	: No data available
Specific gravity	: 1.32	Octanol/Water Part. Coeff.	: No data available
Density	: 11.03 lbs/gal		
Solubility	: Soluble in water		

9.2. Other information

: No further information available.

**SECTION 10: Stability and reactivity**

- 10.1. Reactivity : No further relevant information available.
- 10.2. Chemical stability : The product is stable under normal ambient conditions.
- 10.3. Possibility of hazardous reactions : No further relevant information available.
- 10.4. Conditions to avoid : No further relevant information available.
- 10.5. Incompatible materials : Slightly reactive with oxidizing agents, non-stainless steel metals, and alkalis.
- 10.6. Hazardous decomposition products : Burning may result in formation of ammonia fumes.
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**SECTION 11: Toxicological information**

- 11.1. Information on toxicological effects
- Routes of exposure : Skin contact, eye contact, ingestion.
- Skin corrosion/irritation : Causes slight skin irritation.
- Eye damage/irritation : Causes eye irritation.
- Acute toxicity : Not classified.
- Carcinogenicity : Not classified.
- Reproductive toxicity : Not classified.
- LD50 : Not established.
- Symptoms/injuries after skin contact : Causes slight skin irritation.
- Symptoms/injuries after eye contact : Causes eye irritation.
- Symptoms/injuries after inhalation : None. Not considered an inhalation hazard.
- Symptoms/injuries after ingestion : May cause stomach cramps and/or nausea.
- NTP (*National Toxicology Program*) : Substance is not listed.
- IARC (*International Agency for Research on Cancer*) : Substance is not listed.
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**SECTION 12: Ecological information**

- 12.1. Toxicity : No testing data available.
- 12.2. Persistence and degradability : Aquatic toxicity: will release ammonium ions in water by hydrolysis. Ammonia is toxic to aquatic organisms. Avoid spills/releases to surface waters.
- 12.3. Bioaccumulative potential : No data available.
- 12.4. Mobility in soil : Non-persistent when applied using normal agricultural practices.
- 12.5. Other adverse effects : No further relevant information available.
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**SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

Waste disposal recommendations : Recycle excess product if possible. Avoid sewage and landfill disposal.  
Do not discharge waste effluents to surface waters.

Waste containers : Do not use metal waste containers.

## 13.2. Reference to other sections

: See Section 8 for exposure control information.

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**SECTION 14: Transport information**

## 14.1. Transport information

UN-Number : None

DOT, ADR, ADN, IATA, IMDG : Non-regulated material

UN proper shipping name : Not regulated for transportation

Transport hazard class : Not regulated

Class – DOT, ADR, ADN, IATA, IMDG : Non-regulated material

Packing group – DOT, ADR, IMDG, IATA : Non-regulated material

Environmental hazards: Marine pollutant : Not classified as a marine pollutant  
IMDG

Transport in bulk according to Annex II of : Not applicable  
MARPOL 73/78 and IBC code

Special precautions for user : None

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**SECTION 15: Regulatory information**

## 15.1. US Federal regulations

SARA 302 (EHS) : Product is not listed.

SARA 313 (TRI) : Zinc compounds (0.5%), Manganese compounds (> 0.1%).

## 15.2. International regulations

Canada : Product is listed on Domestic Substances List.

European Union : Product is not listed.

## 15.3. US State regulations

California Proposition 65 : Product is not listed.

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**SECTION 16: Other information**

## 16.1. Other information

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Date of preparation/last revised : 09/26/2017

Prepared by : Winfield Solutions, LLC

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