

SAFETY DATA SHEET (SDS)

Agro-K Corporation

I. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Opti Start
 Common Name: Liquid fertilizer
 Identified Uses: Intended for agriculture. Not for human consumption.

Supplier: AGRO-K CORPORATION
 8030 MAIN STREET NE
 MINNEAPOLIS, MN 55432
 Telephone: (763) 780-4116 / (800) 328-2418
 FAX: (763) 780-4316

CHEMTREC
 Emergency Telephone: (800) 424-9300

II. HAZARDS IDENTIFICATION

Classification:
 Skin Irritant 1 H317
 Eye Irritant 2A H319
 Respiratory Sens. 1 H334
 Carcinogenicity 2 H351



Hazard pictogram:

Signal word: Danger

Hazard statements:
 H317 – May cause an allergic skin reaction
 H319 – Causes eye irritation
 H334 – May cause allergy, asthma symptoms, or breathing difficulties if inhaled
 H402 – Suspected of causing cancer

Precautionary statements:
 P261 – Avoid breathing vapors/fume/mist/spray
 P272 – Contaminate clothing should not be allowed out of workplace
 P264 – Wash thoroughly after handling
 P285 – Use respirator if in area with inadequate ventilation
 P280 – Wear protective gloves/clothing/eyewear/face
 P302+P352 – If on skin: Wash with plenty of soap and water
 P304+P340 – If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 – If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P342+P311 – If experiencing respiratory symptoms or feeling unwell, call a poison center/doctor
 P332+P313 – If skin irritation occurs: Get medical advice/attention
 P337+P313 – If eye irritation occurs: Get medical advice/attention
 P362 – Take off contaminated clothing and wash before reuse
 P501 – Dispose of contents/container in accordance with local/regional/national regulations

III. COMPOSITION/INFORMATION ON INGREDIENTS

Blend of the following ingredients:

Chemical Compound	CAS Number
Cobalt Carbonate	513-79-1
Zinc Sulfate	7446-19-7
Manganese Sulfate	10034-96-5
Sodium Molybdate	10102-40-6

*Ingredients not specifically listed are non-hazardous and are considered to be confidential

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IV. FIRST AID MEASURES

If in Eyes:	Hold eyelid open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If irritation develops and persists, call a poison control center or doctor immediately for treatment advice.
If on Skin:	Take off contaminated clothing. Rinse skin immediately with plenty of soap and water for 15-20 minutes. If irritation persists, call a poison control center or doctor immediately for treatment advice.
If Swallowed:	Give large quantities of water and induce vomiting. Do not give anything to an unconscious or convulsing person. Call a poison control center or doctor immediately for treatment advice.

Hotline Number: Have the product container or label with you when calling a poison control center or doctor or going for treatment. In case of emergency, call ChemTrec at 1-800-424-9300.

V. FIRE FIGHTING MEASURES

Firefighting notes:	Material will not burn.
Suitable extinguishing media:	Use extinguishing media for surrounding cause of fire.

VI. ACCIDENTAL RELEASE MEASURES

Spill procedure:	Capture product and reuse material if uncontaminated. If contaminated, place in a suitable container for proper disposal.
Clean-up	Mop, vacuum, scoop, or sweep up material and place in container for disposal.

VII. HANDLING AND STORAGE

Precautions for safe handling:	Keep out of reach of children.
Storage Conditions:	Keep in closed container and properly labeled. May be corrosive to copper, brass or mild steel.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hand protection:	Wash thoroughly after handling.
Eye protection:	Wear protective eyewear if exposure is expected.
Other information:	Do not eat, drink, or use tobacco during use. Practice good hygiene after use of this material; especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Physical description:	Liquid
Color:	Dark amber brown.
Odor:	Slightly sweet
Odor threshold:	No data available
Vapor density:	No data available
pH:	No data available
Relative density:	1.20
Melting/freezing point:	0 degrees C (32 degrees F)
Solubility:	Soluble in water
Boiling point:	No data available

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Flash point:	No data available
Flammability:	No data available
Vapor Pressure:	No data available
Partition coefficient:	No data available
Auto-ignition temperature:	No data available
Viscosity:	No data available

X. STABILITY AND REACTIVITY

Chemical stability:	Stable.
Incompatibility with other materials:	Strong acids, strong bases, strong oxidizers, water reactive materials. May be corrosive to copper, brass or mild steel.
Hazardous combustion:	Will not occur.
Hazardous polymerization:	Will not occur.
Hazardous decomposition products:	When heated (in a fire), may give off ammonia gas.

XI. TOXICOLOGY

Potential acute health effects:

Eyes:	Irritating to eyes. May cause sensitization by inhalation.
Skin:	Irritating to skin.
Inhalation:	Mist may cause irritation.
Ingestion:	May cause sensitization by skin contact.

Potential chronic health effects

Carcinogenic effects:	No known significant effects or critical hazards.
Mutagenic effects:	No known significant effects or critical hazards.

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Cobalt carbonate	LD50 Oral	Rat	640 mg/kg	Not Available

Conclusion Summary: carbonic acid, cobalt(2+) salt (1:1): Inhalation of this material may cause sensitive individuals to develop eczema and/or asthma

Chronic Effects on Humans:	CARCINOGENIC EFFECTS: Classified A3 (Proven for animals.) by ACGIH [carbonic acid, cobalt(2+) salt (1:1)]. MUTAGENIC EFFECTS: Classified 3 by European Union [carbonic acid, cobalt(2+) salt (1:1)].
Other Toxic Effects	Very hazardous by the following route of exposure – ingestion

XII. ECOLOGICAL INFORMATION

Aquatic ecotoxicity:	No data available
Biodegradability:	No data available
Environmental Precautions:	No known significant effects or critical hazards
Mobility:	Not available
Other Adverse Effects:	No known significant effects or critical hazards

XIII. DISPOSAL CONSIDERATIONS

Waste Disposal Method:	This material must be disposed of according to federal, state, or local procedures under the resource conservation and recovery act.
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FERTILIZER DISPOSAL:

Use according to label instructions, contact your State or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:***Nonrefillable container:***

Do not reuse or refill this container. Then offer for recycling if available, or puncture and dispose in a sanitary landfill, or by other procedures approved by state and local authorities. If rinsed cannot be used, follow fertilizer disposal instructions. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 % full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times

XIV. TRANSPORT INFORMATION

Shipping Name:	Not regulated by DOT
Hazard Class:	None
Identification No.:	None
Labels Required:	None
Placarding:	None

XV. REGULATORY INFORMATION

HCS Classification:	Irritating material Sensitizing material
U.S. Federal regulations:	<p>TSCA 8(a) IUR Exempt/Partial exemption: Not determined</p> <p>United States inventory (TSCA 8b): All components are listed or exempted.</p> <p>Clean Air Act (CAA) 112 accidental release prevention: No products were found.</p> <p>SARA 302/304/311/312 extremely hazardous substances: No products were found.</p> <p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 302/304/311/312 hazardous chemicals: No products were found.</p> <p>SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.</p>

Form R – Reporting requirements Supplier notification:

Carbonic acid, cobalt (2+) salt (1:1) 513-79-1

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

USA

TSCA 8(a) IUR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

EU regulations carbonic acid, cobalt(2+) salt (1:1)

S53- Avoid exposure - obtain special instructions before use.

S22- Do not breathe dust.

S36/37- Wear suitable protective clothing and gloves.

S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S61- Avoid release to the environment. Refer to special instructions/safety data sheet.

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R49- May cause cancer by inhalation.

R68- Possible risk of irreversible effects.

R60- May impair fertility.

R20/22- Also harmful by inhalation and if swallowed.

R42/43- May cause sensitization by inhalation and skin contact.

R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

International regulations/ International lists:

Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: All components are listed or exempted.

Korea inventory: All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

XVI. OTHER INFORMATION

DISCLAIMER: The information presented herein is based on available data from reliable sources and is correct to the best of Agro-K, Corporation knowledge. Agro-K, Corporation makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions.

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