Coastal AgroBusiness, Inc.

Safety Data Sheet

SDS Number: 11530
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Revelin

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Revelin

EPA REGISTRATION NUMBER: 19713-510-5549

CAS NO: 62924-70-30

FORMULA: $C_{16}H_{12}ClF_4N_3O_4$

SYNONYMS: Flumetralin

Manufactured for:
Coastal AgroBusiness, Inc.
PO Box 856
Greenville, NC 27835
Phone: 1-800-635-1388

Emergency Telephone Numbers
Chemtrec (24 hours)
1-800-424-9300
Coastal AgroBusiness, Inc. (Weekdays – Eastern Standard Time)
1-800-635-1388

2. HAZARDS IDENTIFICATION SUMMARY

EMERGENCY OVERVIEW

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS-US Classification

Health Hazards:

Acute Toxicity - Inhalation 4	H332
Eye Irritant 2B	H320
Skin Irritant 2	H315
Aspiration Hazard 1	H304
Skin Sensitizer 1B	H317
Carcinogenicity 2	H351
Specific Target Organ Toxicity - Repeated Exposure 2	H373
Specific Target Organ Toxicity - Single Exposure 3	H335
Specific Target Organ Toxicity - Single Exposure 3	H336

Environmental Hazards:

Aquatic Toxicity - Acute 1	H400
Aquatic Toxicity - Chronic 2	H411

Physical Hazards:

Flammable Liquid and Vapor 4	H227

LABEL ELEMENTS

GHS-US Labeling

Hazard Pictogram (GHS-US)



GHS09 GHS08 GHS07

SIGNAL WORD (GHS-US)

DANGER

HAZARD STATEMENTS (GHS-US)

H332 - Harmful if inhaled.
H320 - Causes eye irritation.
H315 - Causes skin irritation.
H304 - May be fatal if swallowed and enters airways.
H317 - May cause allergic skin reaction.
H351 - Suspected of causing cancer.
H370 - May cause damage to blood, liver spleen through prolonged or repeated exposure.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H400 - Very toxic to aquatic life.
H411 - Toxic to aquatic life with long-lasting effects.
H227 - Combustible liquid.

PRECAUTIONARY STATEMENTS (GHS-US)

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from flames and hot surfaces. No smoking.
P233 - Keep container closed.
P235 - Keep cool.
P260 - Do not breathe dust/fumes/gas/mist/vapors/spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink, or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, and face protection.
P301+P310+P331 - IF SWALLOWED: Immediately call a poison center/doctor. Do NOT induce vomiting.
P303+P361+P313 - IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
P304+P312+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
P305+P351+338+313 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
P308+P313 - IF EXPOSED OR CONCERNED: Get medical advice/attention. Get medical advice if you feel unwell.
P370+P378 - IN CASE OF FIRE: Use foam, dry chemical, carbon dioxide, or water fog to extinguish.
P391 - Collect spillage.
P403+P405 - Store locked up in a well-ventilated place.
P501 - Dispose of contents and container in accordance with local regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients:	Percentage by Weight:	CAS No.	OSHA PEL:	ACGIH TLV:
Flumetralin	13.7%	62924-70-3	N/A	5 mg/m^3
Inert Ingredients	86.3%	N/A	N/A	N/A

4. FIRST AID MEASURES

EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Obtain medical attention without delay, preferably from an ophthalmologist.

SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: IMMEDIATELY call a poison control center for treatment advice. DO NOT induce vomiting unless told to do so by the poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person. Have product label with you when calling a poison control center or doctor.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Note to Physician: There is no specific antidote; treat symptomatically. Probable mucosal damage may contradict gastric lavage. Contains petroleum distillate - vomiting may cause aspiration pneumonia.

5. FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION:	Combustible
FIRE HAZARD:	Combustible liquid and vapor. Will ignite when exposed to heat, flame, and other sources of ignition. Vapors can travel to a source of ignition and flash back causing and explosive and fire. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Thermal decomposition during a fire can produce fumes and irritating gases.
SUITABLE EXTINGUISHING MEDIA:	Use foam, dry chemical, carbon dioxide, or water fog when fighting fires involving this product. Do not use water jet, as this may spread burning material. Minimize the use of water to avoid environmental contamination. Contain all runoff.
FIRE FIGHTING PROCEDURES:	Keep people away. Isolate fire and deny unnecessary entry. Evacuate the area and fight the fire from upwind at a safe distance to avoid hazardous vapors or decomposition products. Dike and collect fire extinguishing water to prevent environmental damage and excessive waste runoff.
SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:	Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Use full face shield and operate in positive pressure mode. Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical-resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical-resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon oxides, nitrogen oxides, halogenated compounds, irritating fumes, and smoke.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN MATERIAL IS RELEASED OR SPILLED:

Contain spilled material if possible. Small spills: Apply suitable absorbent, then sweep up. Collect in suitable and properly labeled containers. large spills: See Section 13, Disposal Considerations, for additional information.

PERSONAL PRECAUTIONS:

Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

ENVIRONMENTAL PRECAUTIONS:

Prevent from entering into soil, ditches, sewers, waterways, and/or groundwater. See Section 12, Ecological Information.

7. HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN

HANDLING:	Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not swallow. Avoid breathing vapor. Use with adequate ventilation. Wear coveralls over short-sleeved shirt and short pants, chemical-resistant footwear plus socks, chemical-resistant apron when handling. Keep away from heat, sparks, and flame. See Section 8, Exposure Controls and Personal Protection.
STORAGE:	Store in a cool, dry, ventilated, and secure area designated specifically for pesticides and away from heat sources. Keep in original containers and keep containers closed when not in use. Do not store in excessive heat. Do not store near children, food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMIT:	Flumetralin 5mg/m^3
EYE/FACE PROTECTION:	Wear safety glasses with side shields or chemical splash goggles to prevent vapors or mists from entering the eyes. If using a full-face shield, always use safety glasses or goggles along with the face shield to ensure adequate protection of the eyes.
SKIN PROTECTION:	Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts, and watchbands, should be removed and disposed of properly.
HAND PROTECTION:	Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber ("nitrile" or "NBR") or Polyvinyl chloride ("PVC" or "vinyl").
RESPIRATORY PROTECTION:	Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. When handling in enclosed areas, when large quantities of mists are generated or prolonged exposure is possible in excess of the TLV, use a respirator with either an organic vapor-removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
INGESTION:	Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.
ENGINEERING CONTROLS:	When handling this product proper ventilation is required to maintain exposure below the TLV. Ventilate all transport vehicles prior to unloading. Facilities storing or utilizing this material should be equipped with and eyewash facility and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
COLOR	Reddish Orange
ODOR:	Solvent
FLASH POINT:	172°F
VAPOR PRESSURE (mmHg):	N/Av
BOILING POINT:	>200°F
VAPOR DENSITY (air = 1):	N/Av
BULK DENSITY (H20 = 1)	1.02 g/cc (8.29 lbs./gal.)
FREEZING POINT:	20°F
SOLUBILITY IN WATER (wt.% - weight):	Emulsifies
pH:	4-7 (5% emulsion at 73.4°F(23°C))
VISCOSITY:	5.85 cP (at 73.4°F(23°C))

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

10. STABILITY AND REACTIVITY

STABILITY:	Thermally stable at typical use temperatures and in closed containers.
CONDITIONS TO AVOID:	Avoid heat or open flame and ignition sources. Avoid high temperatures above 130°F (54.4°C).
INCOMPATIBILITY:	Avoid contact with: Strong oxidizers. Mildly corrosive to steel and tin plate.
HAZARDOUS POLYMERIZATION:	Will not occur.
THERMAL DECOMPOSITION:	Decomposition products can include and are not limited to: Carbon oxides, nitrogen oxides, and halogenated compounds.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Ingestion:	LD_{50}, (rat): >5,000 mg/kg
Dermal:	LD_{50}, (rat): >2,000 mg/kg
Inhalation:	LC_{50}, (4h), Aerosol, (rat): >1.55 mg/l
Eye irritation (rabbit):	Moderate irritation
Skin irritation (rabbit):	Slight to mild
Sensitization skin:	Non-sensitizer (Guinea Pigs)
CHRONIC/SUBCHRONIC TOXICITY:	Liver, blood, and spleen toxicity occurred at the highest dose level (dogs). Effects on liver (rats).
CARCINOGENICITY:	Not expected to be carcinogenic in humans.
TERATOGENICITY, MUTAGENICITY, AND OTHER REPRODUCTIVE EFFECTS:	None known.

12. ECOLOGICAL INFORMATION

Ecotoxicological data based on the active ingredient Flumetralin

ENVIRONMENTAL FATE:	Very highly toxic to fish, daphnids, and other aquatic organisms. Practically nontoxic to birds and bees.
PERSISTENCE AND DEGRADABILITY:	Very persistent in aerobic soils, some potential to leach to groundwater.
AQUATIC TOXICITY:	
Rainbow Trout:	96 hours, LC50: > 3.2 ppb
Bluegill:	96 hour, LC50: 23 µg/L
Daphnia magna:	48 hour, EC50: 2.8 ppb
ARTHROPOD TOXICITY:	
Bees:	48h, EC50: >100 µg/bee
BIRD TOXICITY:	
Mallard Duck:	14-day, LC50: 4,800 mg/kg
Bobwhite Quail:	21-day, LD50: > 2,150 mg/kg

13. DISPOSAL CONSIDERATIONS

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national, and local laws.

14. TRANSPORTATION INFORMATION

DOT:	Non-regulated
IMDG:	UN 3082, Environmentally hazardous substance, liquid, N.O.S. (Flumetralin), 9, PG-III, Marine Pollutant
ICAO/IATA:	UN 3082, Environmentally hazardous substance, liquid, N.O.S., (Flumetralin), 9, PG-III
FREIGHT DESCRIPTION:	Plant growth regulator, liquid, n.o.s.
ERG GUIDE No.:	171

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations, and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard:
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
EPA FIFRA INFORMATION:
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SOS), and for workplace labels of non-pesticide chemical. The hazard information required on the pesticide label is listed out below.
The pesticide label also includes other important information, including directions for use.

EPA/CERCLA Reportable Quantity:	None
Hazard statements on EPA label:	**CAUTION:** Harmful if absorbed through skin. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing.
SARA/TITLE III:	
Sec. 302. Extremely Hazardous Substance Notification:	This material is not known to contain any Extremely Hazardous Substances.
Sec. 311/312. Hazard Categories:	Fire Hazard; Immediate health hazard; Chronic health hazard
Sec. 313. Toxic Chemicals:	None
RCRA Waste Code:	Not listed
CA Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):	This product is not listed
Toxic Substances Control Act (TSCA):	All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

16. OTHER INFORMATION

SDS STATUS:	Developed
REASON FOR CHANGE:	New Product
PREPARED BY:	Tandy O. Dunn, Director of Health, Safety & Environmental Affairs

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Coastal AgroBusiness, Inc. recommends that each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown below. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

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