



MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY INFORMATION

Trade Name (as labeled): GreenSun® ES 99.5%

Common Name: Elemental Sulfur 99.5%

Manufactured By: CoreAgri, LLC
PO Box 1027
Arroyo Grande, CA 93421

Business Phone: (805) 201-9049

Emergency Phone: INFOTRAC – (800) 535-5053

Date of Preparation: December, 2009
Updated July, 2011

SECTION 2. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Exposure Limits In Air	
		ACGIH TVL (ppm)	OSHA PEL (ppm)
Sulfur	7704-34-9	NA	NA
NE = Not Established		NA = Not Available	

SECTION 3. EMERGENCY/HAZARDS OVERVIEW

Emergency Overview: Bright yellow colored, free flowing pastille with a possible slight sulfur odor. Dust may cause mild irritation. Sulfur trioxide fumes at temperatures above 1067 °F. Not D.O.T. regulated.

Symptoms Of Over Exposure:

Eyes: Sulfur dust may cause severe irritation with prolonged exposure.
Skin: Prolonged or repeated exposure to sulfur dust may cause skin irritation.
Inhalation: Sulfur dust may cause breathing difficulties and irritation of mucous membranes.
Ingestion: Solid sulfur can be digested in fairly large amounts without injury.
Injection: Not possible.

SECTION 4. FIRST-AID MEASURES

<u>If Inhaled:</u>	Remove to fresh air. If breathing becomes difficult, contact a medical physician. Give artificial respiration if victim is not breathing and obtain immediate medical attention.
<u>If Ingested:</u>	Seek Medical Attention. Do not induce vomiting unless directed to do so by a medical professional. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. If vomiting occurs, keep head lower than hips to prevent introduction of fluid into the lungs.



<u>In Case Of Skin Contact:</u>	Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. Seek medical attention if skin becomes irritated.
<u>In Case Of Eye Contact:</u>	Flush immediately with water for at least 15 minutes, lifting the upper and lower eyelids occasionally. Call a physician if eye irritation persists.
Victims of chemical exposure and all rescuers must be taken for medical attention. Take a copy of label and MSDS to physician or health professional with victim.	

SECTION 5. FIRE-FIGHTING MEASURES

Flash Point:	Pure liquid sulfur, 370 °F. Impure liquid sulfur, 428 °F.
LEL Flammable Limits:	35 gm/m ³ .
UEL Flammable Limits:	1400 gm/m ³ .
Auto Ignition Temperature:	Dust Clouds, 374 °F.
Extinguishing Media:	Use any standard agent suitable for surrounding structural fire or for other chemicals that may be involved. Fine water sprays and/or dry chemical agent. CO ₂ , dry chemicals, or sand.
Fire Extinguishing Media to Avoid:	Hoses and extinguishers with pressure streams should be avoided where solid sulfur is dusty or where it may create a further hazard by raising more dust clouds.
Unusual Fire And Explosion Hazards:	Sulfur trioxide fumes at temperatures above 1067 °F. Dust suspended in air is readily ignited by flame, static electricity, or friction spark. Every reasonable step must be taken to minimize dust formation. Dust tight casings should be equipped with explosion relief vents. Sparkless electrical equipment is recommended. Handling equipment must be grounded or bonded to avoid static electricity. Keep away from sources of flame or sparks. Detailed recommendations in Manufacturing Chemists Association SD-74 and National Safety Council 612 Bulletins covering "Sulfur" should be followed when handling GreenSun ES 99.5%.
Special Firefighting Procedures:	Wear positive pressure, self-contained breathing apparatus (SCBA) and goggles. Avoid exposure to smoke or fumes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Spill And Leak Response: Pick up dry spills by scooping, shoveling, or vacuuming and place into containers for reuse or disposal. The minimum personal protective equipment should include rubber gloves, rubber apron, and chemical goggles. Gas masks or SCBA gear may be required. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Keep material out of sewers, storm drains, and surface waters. Comply with all applicable government regulations on spill reporting, handling, and waste disposal. For landfill disposal, mix with limestone 3 times the weight of sulfur.

SECTION 7. STORAGE AND HANDLING

Storage Practices: Store in a cool (above 40 °F), dry, well-ventilated area away from incompatible materials. Solid becomes corrosive to metals when stored



wet. Product will physically break down when exposed to moisture.

Handling Practices:

Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Wash with soap and water after handling.

Work/Hygiene Practices:

Avoid getting chemicals ON YOU or IN YOU. Wash hands with soap and water after handling chemicals. Do not eat or drink around or while handling chemicals. Keep out of reach of children.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation/Engineering Controls: Use of local exhaust is recommended at product transfer points and where dusty conditions exist.

Respiratory Protection: For normal product handling, use any NIOSH approved air-purifying dust respirator. For extremely dusty conditions, a full facepiece purifying particulate respirator is recommended.

Eye Protection: Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, contact lenses should not be worn when working with chemicals because they contribute to the severity of an eye injury.

Hand Protection: Wear cotton or canvas protective glove to prevent contact. Rubber gloves may be used if product may become wet or moist.

Body Protection: Use body protection appropriate for task. Chemical-resistant coveralls and rubber aprons are generally acceptable.

Other Protective Measures: An eyewash and safety shower should be nearby and ready for use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<p><u>Appearance:</u> Bright yellow colored pastille.</p> <p><u>Odor:</u> May have slight sulfur odor.</p> <p><u>pH:</u> Neutral when dry.</p> <p><u>Water Solubility:</u> Insoluble</p> <p><u>Density:</u> 76 lbs/ft³.</p> <p><u>Specific Gravity (H₂O = 1):</u> Solid, 2.07 gm/ml</p>	<p><u>Boiling Point:</u> 832 °F.</p> <p><u>Crystallization Point:</u> NA.</p> <p><u>Freezing Point:</u> 246 °F.</p> <p><u>Vapor Pressure:</u> Solid, less than 0.0001 mm. hg at 68 °F</p> <p><u>Vapor Density (air = 1):</u> >1.</p> <p>NA = Not Available.</p>
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SECTION 10. STABILITY AND REACTIVITY

Stability: Stable.

Conditions To Avoid: Fire and dust explosions.



Incompatibility: Alkaline materials, or mixtures with chlorates, nitrates, or other oxidizing agents.

Hazardous Polymerization: Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicity Data: NA.

Acute Effects:

Eyes: Mild irritant. May cause redness, tearing and/or burning.

Skin: Mild irritant, especially with prolonged exposure or when in contact with moisture.

Ingestion: Nausea and upset stomach

Inhalation: Moderate irritation of nose and throat from dust. May cause dry coughing, wheezing, chest tightness, and burning of mucous membranes.

Chronic Effects: None known.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Stability: Sulfur, is stable in the environment. Its transport in the environment depends upon the exact compound, the pH, the soil type, and the salinity. All work practices should be aimed at eliminating environmental contamination.

SECTION 13. DISPOSAL CONSIDERATIONS

Do not contaminate lakes, streams, ponds, estuaries, oceans, or other waters by discharge of waste effluents or equipment rinsate. Dispose of waste effluents according to federal, state, and local regulations. For landfill disposal, mix with limestone 3 times the weight of sulfur.

SECTION 14. TRANSPORTATION INFORMATION

This product is not regulated per CFR 49 (Special Provisions 172.102 pt 30)

SECTION 15. REGULATORY INFORMATION

SARA Reporting Requirements: This material does not contain toxic chemicals subject to reporting requirements of Section 313, Title III of the Superfund Amendments and Reauthorization Act of 1986.

California Proposition 65: WARNING. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

SECTION 16. OTHER INFORMATION

The information and recommendations herein are taken from data contained in independent, industry recognized references including NIOSH, OSHA, ANSI, and NFPA. This information is, as of date listed above, true and accurate to the best of CoreAgri, LLC knowledge. It is intended for use by persons possessing technical knowledge and at their own discretion and risk. Since actual use is beyond our control, no guarantee, express or implied, and no liability is assumed by CoreAgri, LLC in conjunction with the use of this information. Actual conditions of use and handling may require consideration of information other than, or in addition to, that which is provided herein.