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Safety Data Sheet (SDS)

SODIUM NITRATE

1. Identification of the Substance	**PRODUCT NAME:** Sodium Nitrate **SYNONYM:** Nitric Acid, Sodium Salt, Nitratine, Soda Niter, Chile Saltpetre **DISTRIBUTOR:** EcoFusion Inc., PO Box 251408. Plano, TX 75025 – 1408 (USA) **TEL:** +1 972 403 7449 **FAX:** +1 214 291 5348 **EMERGENCY:** CHEMTREC 800 424 9300
2. Hazards Identification	GHS classification — Hazard Statements (Classification according to Regulation (EC) No *1272/2008)* Oxidizing solid, Category 3 — H272: May intensify fire; oxidizer Health hazard: 1 — H315 Causes skin irritation Flammability: 0· — H319 Causes serious eye irritation Physical hazards: 1 — H335 May cause respiratory irritation Harmful solid, Category 3, oral — H302: Harmful if swallowed EC classification (According to Directive *67/548/EEC)* T: R8 — Contact with combustible material may cause fire R22 — Harmful if swallowed R36 — Irritating to eyes WGK1 — Slight water risk
3. Composition / Information on Ingredients	**MOLECULAR WEIGHT:** 84.99 g/mol **CAS NUMBER:** 7631-99-4 **CHEMICAL FORMULA:** NaNo3 **EINECS**: 231 -554-3
4. First Aid Measures	**SKIN:** Wash off with plenty of water. Remove contaminated clothing. **EYE:** Rinse out with plenty of water with eyelid held wide open. Call in ophthalmologist if necessary. **INGESTION:** Give water to drink (two glasses at the most) . Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20-40 g in1 0% slurry) and consult a doctor as quickly possible. **INHALATION:** If breathed in , move person into fresh air. If not breathing give artificial respiration. Consult a physician. **NOTES TO PHYSICIAN:** Absorption of this product into the body may cause cyanosis. Moderate degrees of cyanosis need to be treated by supportive measures such as bed rest and oxygen inhalation. Through cleansing of the entire contaminated area of the body is of utmost importance. If cyanosis is severed, intravenous injection of methylene blue, 1 *mg/kg* of body weight may be of value.
5. Fire Fighting Measures	**EXTINGUISHING MEDIA:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use water spray to cool fire-exposed containers. Use water only!

	FIRE FIGHTING: Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing. **HAZARDS:** Not combustible. Has a fire-promoting effect due to release of oxygen. Ambient fire may liberate hazardous vapors. Fire may cause evolution of: nitrogen oxides **ADDITIONAL INFORMATION:** Suppress (knock down) gases/vapour/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system. Use water spray to cool unopened containers.
6. Accidental Release Measures	**PERSONAL PRECAUTION:** Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas. **ENVIRONMENTAL PRECAUTION:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. **METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.
7. Handling and Storage	**HANDLING:** Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed . Keep away from sources of ignition - No smoking. Keep away from combustible material. **STORAGE:** Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Do not store near combustible materials. Hygroscopic.
8. Exposure Controls / Personal Protection	**PERSONAL PROTECTIVE EQUIPMENT** Protective clothing should be selected specifically for the working place, depending on concentration and quality of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier. **RESPIRATORY:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection , use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as N IOSH (US) or CEN (EU). **EYE**: Face shield and safety glasses **SKIN AND BODY**: Choose body protection according to the amount and concentration of the dangerous substance at the work place. **HYGEINE**: Avoid contact with skin, eyes and clothing . Wash hands before breaks and immediately after handling the product. Immediately change contaminated clothing. Apply skin protective barrier cream. Use adequate ventilation to keep airborne concentrations low.
9. Physical and Chemical properties	**PHYSICAL STATE:** White Powder or Crystals **ODOUR:** Odorless **MELTING POINT:** 308°C **SOLUBILITY:** Easily soluble in cold water, hot water.

	DENSITY: 2.26 g/cm3.(20°C) **BOILING POINT:** 3800 C @ 760 mm Hg **THERMAL DECOMPOSITION:** >600°C **VAPOR PRESSURE:** 9.9E-17 hPa @ 25°C **SPECIFIC GRAVITY:** 2.26
10. Stability and Reactivity	**STABILITY:** Stable under recommended storage conditions. **CONDITIONS TO AVOID:** High temperatures, incompatible materials, exposure to air, combustible materials, organic material, exposure to moist air or water. **MATERIALS TO AVOID:** **A risk of explosion and/or of toxic gas formation exists with the following substances:** Strong reducing agents, strong acids, amines, chlorates, finely powdered metals, hydrazine, liquid ammonia, amides (eg butyramide, diethyltoluamide, dimethyl formamide), cyanides, permanganates, hypophosphite, sulfites, tannic acid, carbon, antipyrine, sodium thiosulfate, ammonium salts, cellulose, acetanilide, iodides, mercury salts. **Risk of ignition or formation of inflammable gases or vapors with :** Butadiene **HAZARDOUS POLYMERIZATION:** Will not occur. **HAZARDOUS DECOMPOSITION PRODUCTS**: Hazardous decomposition products formed under fire conditions. - nitrogen oxides (NOx), Sodium oxides.
11. Toxicological Information	Acute toxicity — LDso Oral - RAT - 1267mg/kg LDso Oral - RBT - 2680 mg/kg ORL-CHD LDLO 22.5 mg kg" Acute oral toxicity — ORL-MAN LD50 114 mg/kg ORL-CHD LD50 22500 mg/kg Acute inhalation toxicity (RTECS) — LCso rat Dose: 5.5 mg/l, 4 h Irritation of the eyes — Causes irritation Irritation of the skin — Causes irritation RTECS# — WC5600000 Carcinogenicity — Not listed by ACGIH, IARC, NIOSH, NTP, OSHA **POTENTIAL HEALTH EFFECTS** Inhalation: May be harmful if inhaled. May cause respiratory tract irritation. Ingestion: Toxic if swallowed . Skin: May be harmful if absorbed through skin . May cause skin irritation. Eyes: May cause eye irritation
12. Ecological Information	**ECOTOXICITY** Acute aquatic toxicity — LCso 96 h fish(mg,r '): 11060 ppm(stickleback) Fish — BOD 0.1 kg/kg WGK — WGK 1 slight water endangering **PERSISTENCE AND DEGRADABILITY :** Biodegradability: The methods for determining the biological degradability are not applicable to inorganic substances. Partition coefficient:n-octanol/water.Log Pow:3. Method: OECD Test guideline 107 No bioaccumulation expected(log Pow <1). Additional ecological information:

	Do not allow to enter water, waste water, or soil. Other adverse effects: Very toxic to aquatic organisms.
13. Disposal Considerations	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all Federal, Local and State environmental regulations.
14. Transport Information	UN No. : 1498 Hazard Class : 5.1 Packing Group : III Proper shipping name : Sodium nitrate Declaration for land shipment (rail road and road) ADR, RID: UN 1498 Sodium nitrate, 5.1, III **DOT (US)** UN-Number: 1498 Class: 5.1 Packing group: III Proper shipping name: Sodium nitrate Marine pollutant: No Poison Inhalation Hazard: No **IMDG** UN-Number: 1498 Class: 5.1 Packing group:III EMS-No:F-A, S-Q Proper shipping name: SODIUM NITRATE Marine pollutant: No **IATA** UN-Number: 1498 Class: 5.1 Packing group: III Proper shipping name: Sodium nitrate Packing instruction, passenger : 516, Maximum quantity 25 Kg Packing instruction, cargo: 518, Maximum quantity : 100 Kg
15. Regulatory Information	**Safety information according to GHS** **Hazard Statements** H272 May intensify fire; oxidiser. H302 Harmful if swallowed . H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. **Precautionary Statements** P220 Keep/Store away from clothing/combustible materials. P261 Avoid breathing dust/fume/!gas/mist/vapours/spray. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and continue rinsing. **Labelling according to EC Directives** Symbol(s): o Oxidizing X Harmful Risk phrase(s): R8: Contact with combustible material may cause fire. R22 : Harmful if swallowed. R36: Irritating to eyes Safety phrase(s): S22 Do not breathe dust. S24 Avoid contact with skin. S41 In case of fire and/or explosion do not breathe fumes. CAS No. #7631-99-4 is listed on Canada's DSL list, AICS, ENCS, IECSC, PICCS, KECI Other regulations: Take note on Dir 94!33!EC on the protection of young people at work. Take note of Dir 92/85/EEC on the safety

	and health at work of pregnant workers
16. Other Information	N/A

THE INFORMATION IN THIS MSDS RELATES TO THIS SPECIFIC MATERIAL. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. IT IS THE USERS' RESPONSIBILITY TO SATISFY THEMSELVES AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR THEIR OWN PARTICULAR USE.

All non-emergency questions should be Directed to Customer Service at

24 hour emergency Telephone: Chemtrec 800-424-9300
National response in Canada: Canutec 613-996-6666
Outside US & Canada: Chemtrec: 202-483-7616

Note: Chemtrec and Canutec emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, exposure or accident involving chemicals.