

Operating Procedures & Safety Data Sheet



YOUR SAFETY IS OUR FIRST PRIORITY

e-NRG is ONLY suitable for use in liquid bioethanol fires. Do not use in anything with a wick, or anything designed for other fuel types such as gel, kerosene, gasoline, etc. Always follow recommended procedures provided by the fireplace manufacturer.

e-NRG is ONLY to be used in compliance with these Operating Procedures and the Operating Procedures of the bioethanol fireplace where you intend to use this product.

Please refer to the Safety Data Sheet (SDS) for important Health and Safety information.

WARNING: Fuel containers without flame arresters, if used improperly, can result in the inflammation of the fuel within the container, which may cause property damage, personal injury, or even death.

NEVER pour e-NRG over an open flame.
NEVER fill an appliance/burner directly from the e-NRG bottle, risk of explosion.

QUESTIONS?

If you have any questions please visit www.e-nrg.com/safety, or if you prefer to speak to a Customer Service Representative, please contact us.

+1 (888) 670 ENRG / info@e-nrg.com



Do not fill while hot



Do not fill while operating



Do not fill above MAX line



Flammable



Use with approved Jerry Can only



Keep away from children

INSTRUCTIONS FOR SAFE USE

This decanting procedure must be performed in a well ventilated space away from any sources of ignition.

When using an EcoSmart Fire Burner:

If you are an owner of an authentic EcoSmart Fire, you would have received a Jerry Can with an attached Safety Spout as part of the standard operating accessories. An Adapter is available to connect the Safety Spout to the e-NRG bottle which eliminates the need to decant the fuel from the bottle into the Jerry Can.

1. Attach the Adapter to the Safety Spout.
2. Attach the Safety Spout with Adapter to the e-NRG bottle and ensure it is securely fastened. You are ready to approach the burner (the burner must be in an off/cold state).

Without the e-NRG Adapter the procedure below must be followed. Manuals and videos are also available online:

www.ecosmartfire.com/about/fireplace-safety

When using in a bioethanol fireplace that does NOT have an EcoSmart Fire Burner:

e-NRG must be decanted into an approved Jerry Can that is fitted with a flame arrester following the instructions outlined below.

1. Remove the cap from your e-NRG bottle and the spout from the Jerry Can.
2. In a safe location, away from any source of ignition, carefully decant the fuel from the bottle into the Jerry Can through its opening, avoiding spillage. If spillage occurs, clean thoroughly before proceeding.
3. Re-screw the cap tightly back onto the Jerry Can to contain fuel and avoid accidental spillage. Test that it is closed securely before moving away from your decanting area.
4. You are ready to approach the burner (the burner must be off and in a cold state). Once the e-NRG bottle is empty, put the original lid securely back onto the bottle for safe recycling.



Safety Data Sheet



Section 1. IDENTIFICATION

Product Name: e-NRG
Product Code: 00101
SDS Date: July 22, 2016

EcoSmart Inc.
5870 W. Jefferson Blvd, Suite L
Los Angeles, CA 90016

General Information: 888-670-3674
CHEMTREC: 800-424-9300

Section 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

GHS Classification:
Flammable liquids (Category 2)
Skin irritation (Category 2)
Eye irritation (Category 2B)
Specific organ toxicity – single exposure (Category 3)

GHS Labeling



Symbol:

Signal Word: Danger

Hazard Statements:
Highly flammable liquid and vapor.
Causes skin irritation.
Causes eye irritation.
May cause respiratory irritation.

Precautionary Statements:

Prevention:
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection /face protection.
Wash hands thoroughly after handling.
Avoid breathing mist/vapors/spray.
Use only outdoors or in a well-ventilated area.

Response:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of fire: consider carbon dioxide, dry chemical powder, dry sand, limestone powder, or alcohol resistant foam to extinguish.

If on skin: Wash with plenty of water.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

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.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center/doctor if you feel unwell.

Storage:

Store in a well-ventilated place. Keep cool. Keep container tightly closed.

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects: See Section 11 for more information

This product does not contain carcinogens or potential carcinogens as listed by OSHA, IARC, or NTP.

This material contains components that are considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Environmental Effects: See Section 12 for more information.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

No.	Component CAS REG. NO.	Amount %	OSHA		ACGIH	
			TWA	STEL	TWA	STEL
1	Ethyl Alcohol CAS #64-17-5	1-100	1000 ppm	Not Avail	1000 ppm	Not Avail
2	Isopropyl Alcohol CAS #67-63-0	1-100	400 ppm	Not Avail	400 ppm	Not Avail

Section 4: FIRST AID MEASURES

Emergency first aid procedures by route of exposure:

Inhalation: If symptoms are experienced, remove source of contamination or move victim to fresh air. If affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting. If the material is swallowed, get medical attention or advice.

Skin: If irritation is experienced, flush with water. If irritation persists, get medical attention.

Eyes: Immediately flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms persist, get medical attention.

Section 5: FIRE FIGHTING MEASURES

Flash Point: (ethyl alcohol) 13°C

Auto-ignition Temperature: (ethyl alcohol) 363°C

Lower Explosion Limit: (ethyl alcohol) 3.3%

Upper Explosion Limit: (ethyl alcohol) 19.0%

Flammability Classification: Class IB Flammable Liquid

Suitable Extinguishing Media: Use methods appropriate for the surrounding fire. Consider water spray or fog, carbon dioxide, dry chemical powder, or alcohol resistant foam.

Products of Combustion: Upon decomposition this product may

Safety Data Sheet



emit carbon dioxide, carbon monoxide, and/or low molecular weight hydrocarbons.

Fire Fighting Equipment/Instructions: Wear protective clothing and equipment suitable for the surrounding fire, including helmet, facemask, and self contained breathing apparatus.

HAZARD	HMIS	NFPA
Toxicity	2	2
Fire	3	3
Reactivity	0	0

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Protection: For large spills wear gloves, Tyvek suits, safety glasses, and appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Special Properties: Flammable Liquid! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. If container is not properly cooled, it can rupture in the heat of a fire.

Environmental Precautions: Prevent discharge to open bodies of water, municipal sewers, and watercourses.

Method for Containment: Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite or diatomaceous earth.

Methods for Clean-up: Ventilate area of leak or spill. Use spark-proof tools to sweep or scrape up and containerize in approved chemical waste container. Wash spill area with water.

Section 7: HANDLING AND STORAGE

Handling: Keep away from heat, sparks and flame. Use only with adequate ventilation. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

Storage: Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protective Equipment (PPE)

Respiratory Protection: Vapor respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent.

Wear appropriate respirator when ventilation is inadequate.

Eye/Face Protection: Safety glasses with side shields are

recommended as minimum protection in industrial settings.

Hand Protection: Butyl rubber gloves.

Body: Avoid skin contact. If product comes in contact with clothing, immediately remove soaked clothing and shower.

Other Protective Equipment: Facilities storing or utilizing this material should be equipped with eyewash and safety shower facilities.

See section 3 for exposure guidelines

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance, State	Clear liquid
Color	Colorless
Odor	Not available
pH (1%soln/water)	Not Available
Vapor Density (Ethyl Alcohol)	1.6
Boiling Point (Ethyl Alcohol)	78.5°C
Vapor Pressure (Ethyl Alcohol)	57.3 hPa at 20°C
Melting Point (Ethyl Alcohol)	-114.1°C
Freezing Point (Ethyl Alcohol)	Not Available
Flash Point (See Section 5)	
Flammability Properties (See section 5)	
Solubility (in water)	Soluble
Specific Gravity (Ethyl Alcohol)	0.78-0.8
Evaporation Rate	Not Available
Octanol/Water partition coefficient (Kow) (Ethyl Alcohol)	-0.32
Auto-ignition temperature: (Ethyl Alcohol)	363°C
Decomposition temperature:	Not Available

Section 10: STABILITY AND REACTIVITY

Stability: This material is considered stable at ambient temperatures 70°C (21°C).

Condition to Avoid: Flames, sparks, electrostatic discharge, heat and other ignition sources.

Incompatible Materials: This product reacts with strong acid, strong bases, and oxidizing agents.

Hazardous Decomposition: Upon decomposition, this product evolves carbon monoxide, carbon dioxide, and/or low weight hydrocarbons.

Hazardous Reactions: This product will not undergo polymerization.

Section 11: TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Analysis LD50

Ethyl Alcohol (64-17-5)

Oral LD50 Rat: 7060 mg/kg

Isopropyl Alcohol (67-63-0)

Inhalation LC50 Rat: 72.6 mg/L/4H

Oral LD50 Rat: 4396 mg/kg

Dermal LD50 Rat: 12800 mg/kg

Dermal LD50 Rabbit: 12870 mg/kg

CHRONIC EFFECTS:

Ethyl Alcohol (64-17-5)

Carcinogenic Effects: A4 - Not classifiable for human or animal by ACGIH.

Mutagenic Effects: Not Available.

Safety Data Sheet



Teratogenic Effects: Not Available.

Developmental Toxicity: Ethyl alcohol is a developmental toxin when consumed during pregnancy.

Target Organs: When consumed, ethyl alcohol can target the respiratory system, skin, eyes, CNS, liver, blood, and reproductive system.

Inhalation: May cause irritation to the mucous membranes of the upper respiratory tract. Exposure over 1000 ppm may cause headache, drowsiness, lassitude, loss of appetite, inability to concentrate, throat irritation
Ingestion: Can cause depression of Central Nervous System, nausea, vomiting, diarrhea, intoxication, and in acute cases, death
Eye: Liquid and vapor may cause irritation. Splashes may cause temporary pain and blurred vision.

Skin: May cause irritation, cracking, flaking, and defatting of skin on prolonged contact.

Chronic Exposure: Prolonged skin contact causes drying and cracking of skin. May affect nervous system, liver, blood, reproductive system.

Isopropyl Alcohol (67-63-0)

Carcinogenicity: No known hazards

Mutagenicity: Not available.

Reproductive: Not available.

Developmental: Not available.

Target Organs: skin, eyes, CNS, and respiratory system.

Eye: Contact with eyes may cause redness and pain.

Skin: Contact with skin may cause dry skin.

Inhalation: Inhalation of this material may cause: cough, dizziness, drowsiness, headache, sore throat, abdominal pain, labored breathing, nausea, vomiting, and unconsciousness.

Ingestion: Ingestion of this material may cause: cough, dizziness, drowsiness, headache, sore throat, abdominal pain, labored breathing, nausea, vomiting, and unconsciousness.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Ethyl Alcohol (64-17-5)

96 hour LC50 *Oncorhynchus mykiss*: 12,900 mg/L (flow-through) (30 days old)

96 hour LC50 *Pimephales promelas*: 14.2 mg/L

5 min EC50 *Photobacterium phosphoreum*: 35,470 mg/L

30 min EC50 *Photobacterium phosphoreum*: 34,634 mg/L

48 hour EC50 *Daphnia magna*: 9,268 mg/L

24 hour EC50 *Daphnia magna*: 10,800 mg/L

Ecotoxicity: Isopropyl Alcohol (67-63-0)

96 Hr EC50 *Scenedesmus subspicatus*: >1000 mg/L

72 Hr EC50 *Scenedesmus subspicatus*: >1000 mg/L

96 Hr LC50 *Pimephales promelas*: 9640 mg/L [flow through]

96 Hr LC50 *Pimephales promelas*: 94900 mg/L [flow through] (29 days old)

96 Hr LC50 *Pimephales promelas*: 61200 mg/L [flow through] (31 days old)

5 min EC50 *Photobacterium phosphoreum*: 35390 mg/L

48 Hr EC50 *Daphnia magna*: 13299 mg/L

Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

Proper Shipping Name: Flammable Liquids, n.o.s.

Hazard Class: 3

Identification No.: UN1993

Packing Group: II

Label: Flammable Liquid

Section 15: REGULATORY INFORMATION

TSCA Inventory This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.

SARA 302/304 The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.

CERCLA The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: No components were identified.

SARA 311/312 Hazard The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: fire, Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard.

Section 16: OTHER SUPPLEMENTAL INFORMATION

Prepared by: EcoSmart Inc. on June 3, 2014

Disclaimer: The information and recommendations contained in the Material Safety Data Sheet (SDS) are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of this date hereof.

EcoSmart Inc, however, makes no representation as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving the information will be required to make their own determination as to its suitability for their purposes prior to use. In no event will EcoSmart Inc be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information. User assumes all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations.

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE, ARE MADE BY ECOSMART INC HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS. The information as supplied herein is simply to be informative and intended solely to alert the user of the substance which is the subject matter of this SDS. The ultimate compliance with federal, state or local regulations concerning the use of this compound, or compliance with respect to product liability, rests solely upon the purchaser thereof.

This information relates to the material designated and may not be valid for such material used in combination with any other materials nor in any process.