

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, kerosine, 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.

⚠ Prop 65 Warning: Cancer and Reproductive Harm – The use of this product and byproducts of the combustion of fuel, such as propane, natural gas, and/or ethanol can expose you to chemicals including formaldehyde, which are known to the State of California to cause cancer, and including acetaldehyde, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov/.

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



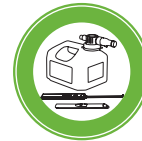
Do not fill while operating



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: September 23, 2016

MAD Design USA
5875 Green Valley Circle, Suite 100
Culver City, CA 90230

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

Section 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

GHS Classification:

Flammable liquids (Category 2)
Causes skin corrosion/irritation (Category 2)
Causes serious eye irritation (Category 2A)
Causes specific target organ toxicity, single exposure;
respiratory irritation (Category 3)

GHS Labeling



Symbol:

Signal Word: Danger

Hazard Statements:

Highly flammable liquid and vapor.
Causes skin irritation.
Causes serious 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.

Take precautionary measures against static discharge. Use only non-sparking tools.

Wash hands thoroughly after handling.

Avoid breathing mist/vapors/spray.

Wear protective gloves/eye protection/face protection.

Use only in a well-ventilated area or outdoors.

Response:

IF ON SKIN (or hair): Take all contaminated clothing off immediately. 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.

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 in accordance with applicable regional, national and local laws and regulations.

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

Ethyl Alcohol (CAS #64-17-5)	80 - 100% Concentration
Isopropyl Alcohol (CAS #67-63-0)	1 - 20% Concentration

Section 4: FIRST AID MEASURES

General Advice: Consult a physician. Show data sheet to the doctor in attendance. Move out of dangerous area.

Emergency first aid procedures by route of exposure:

Inhalation: If breathed in, 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. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Skin: Wash off with soap and water. If irritation is experienced, 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

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

Special Hazards: Carbon oxides.

Further Information: Use water spray to cool unopened containers.

Products of Combustion: Upon decomposition this product may 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.

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.

Safety Data Sheet



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 kept upright to prevent leakage until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Ethyl Alcohol (64-17-5)

OSHA TWA	1000 ppm
OSHA STEL	Not Available
ACGIH TWA	1000 ppm
ACGIH	Not Available

Isopropyl Alcohol (67-63-0)

OSHA TWA	400 ppm
OSHA STEL	Not Available
ACGIH TWA	200 ppm
ACGIH	400 ppm

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)

Eye/Face Protection: Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with butyl rubber gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Impervious clothing, flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) 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 NIOSH (US) or CEN (EU).

Control of Environmental Exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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)	No Data Available
Boiling Point (Ethyl Alcohol)	78.0-80.0 °C (172.4-176.0 °F)
Vapor Pressure (Ethyl Alcohol)	59.5 hPa (44.6 mmHg) at 20 °C (68.0 °F)
Melting Point (Ethyl Alcohol)	-114.1 °C (-173.38 °F)
Flash Point	14.0 °C (57.2 °F) - Closed Up
Flammability Classification	Class 1B Flammable Liquid
Solubility (in water)	Soluble
Relative Density	0.7974 g/cm ³
Evaporation Rate	Not Available
Octanol/Water partition coefficient (Kow) (Ethyl Alcohol)	-0.32
Auto-ignition temperature: (Ethyl Alcohol)	363.0°C (685.4 °F)
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. Extremes of temperature and direct sunlight.

Incompatible Materials: Alkali metals, Oxidizing agents, Peroxides.

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

Hazardous Reactions: This product will not undergo polymerization.

Possibility of Hazardous Reactions: Vapors may form explosive mixture with air.

Section 11: TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Analysis LD50

Ethyl Alcohol (64-17-5)
Oral LD50 Rat: 2743 mg/kg
LD50 Dermal-Rabbit: >2000mg/kg
Skin Corrosion/Irritation: Mild Skin Irritation - 24H

Isopropyl Alcohol (67-63-0)
Inhalation LC50 Rat: 8H-16000 ppm
Dermal LD50 Rabbit: 2000 mg/kg
Carcinogenicity: Not identified as probable, possible or confirmed human carcinogen by IARC, NTP or OSHA

Safety Data Sheet



CHRONIC EFFECTS:

Ethyl Alcohol (64-17-5)

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

Mutagenic Effects: Not Available.

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

Ethyl Alcohol (64-17-5) Toxicity: Not Available

Isopropyl Alcohol (67-63-0) Toxicity:

LC50 - Pimephales promelas (Fathead Minnow) - 9,640.00 mg/l - 95h

EC50 - Daphnia magna (Water Flea) - 5,102.00 mg/l - 24h

Immobilization EC50 - Daphnia magna (Water Flea) - 6,851.00 mg/l - 24h

Toxicity to algae EC50 - Desmodesmus subspicatus (Green Algae) - 2,000.00 mg/l - 72h

EC50 - Algae - 1,000.00 mg/l - 24h

Section 13: DISPOSAL CONSIDERATIONS

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

Section 14: TRANSPORTATION INFORMATION

Proper Shipping Name: Alcohols, (Ethanol, Isopropyl Alcohol), n.o.s.

Hazard Class: 3

Identification No.: UN1987

Packing Group: II

Label: Flammable Liquid

Section 15: REGULATORY INFORMATION

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

Ethanol, Isopropyl Alcohol (64-17-5)

SARA 302/304 - No components were identified

SARA 313 - No components were identified

CERCLA - No components were identified

SARA 311/312 - Fire Hazard, Chronic Health Hazard

PROP 65 - No Components were identified

Isopropyl Alcohol (67-63-0)

SARA 302/304 - No components were identified

SARA 313 - No components were identified

CERCLA - No components were identified

SARA 311/312 - Fire Hazard, Acute Health Hazard, Chronic Health Hazard

PROP 65 - No Components were identified

Section 16: OTHER SUPPLEMENTAL INFORMATION

Prepared by: MAD Design USA 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.

MAD Design USA, 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 MAD Design USA 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 MAD DESIGN USA 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.