Safety Data Sheet

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2024 and GHS. Rev 07.
Date of issue: 02/18/2025. Reviewed on 02/18/2025

*Section 1. IDENTIFICATION

Product identifier

· **Trade name: e-NRG**
· **Other means of identification**

· **Product number:** 00101
· **Product Description:** Bioethanol Fuel

Details of the supplier of the safety data sheet
· **Manufacturer/Supplier:**
MAD Design USA
311 North Robertson Blvd. PMB 932
Beverly Hills, CA 90211
General Information: 888-670-3674
+1 (888) 670 ENRG
info@e-nrg.com

· **Emergency telephone number:**
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

*Section 2. HAZARD(S) IDENTIFICATION

· **Classification of the substance or mixture**


GHS02 Flame

Flammable liquids 2 H225 Highly flammable liquid and vapor.


GHS08 Health hazard

Carcinogenicity 1A H350 May cause cancer.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**


GHS02 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Ethanol
· **Hazard statements**
Highly flammable liquid and vapor.
May cause cancer.
· **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground / bond container and receiving equipment.
Use explosion-proof [electrical/ventilating/lighting] equipment.
Use non-sparking tools.
Take action to prevent static discharge.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF exposed or concerned: Get medical advice/attention.
In case of fire: Use CO2, powder or water spray to extinguish.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Unknown acute toxicity:**
This value refers to knowledge of known, established toxicological or ecotoxicological values.
0 % of the mixture consists of component(s) of unknown toxicity.
· **Information pertaining to particular dangers for man and environment:**
· **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

HEALTH	*0
FIRE	3
REACTIVITY	0

*Health = *0*
Fire = 3
Reactivity = 0

Other hazards
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Classification according to (d)(1)(ii) of § 1910.1200**
The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.
· **Hazards not otherwise classified**
There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

*Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures
· **Description:** Mixture of the substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 64-17-5 RTECS: KQ 6300000	Ethanol Flammable liquids 2, H225; Carcinogenicity 1A, H350	80–100%
CAS: 67-63-0 RTECS: NT 8050000	Isopropyl alcohol Flammable liquids 2, H225; Eye irritation 2A, H319; Specific target organ toxicity (single exposure) 3, H336	≥5–<10%

· **Additional information:**
The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

*Section 4: FIRST AID MEASURES

Description of first aid measures
· **General information:**
If symptoms persist, call a physician.
Immediately remove any clothing soiled by the product.
· **After inhalation:**
If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
· **After skin contact:**
Wash with soap and water.
If skin irritation occurs, consult a doctor.
· **After eye contact**:
Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes.
If eye irritation occurs, consult a doctor.
· **After swallowing:**
Do not induce vomiting.
Never give anything by mouth to an unconscious person.
Get medical attention immediately.
Rinse mouth out with water.
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed** Treat symptomatically.

*Section 5: FIRE FIGHTING MEASURES

Extinguishing media
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** No further relevant information.
· **Special hazards arising from the substance or mixture** Products of Combustion: Upon decomposition this product may emit carbon dioxide, carbon monoxide, and/or low molecular weight hydrocarbons.
Advice for firefighters
· **Protective equipment:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

*Section 6: ACCIDENTAL RELEASE MEASURES

· **Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away.
Eliminate all ignition sources.
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers / surface or ground water.
· **Methods and material for containment and cleaning up:**
Dilute with plenty water.
Use spark-proof tools to sweep or scrape up and containerize in approved chemical waste container.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

· **Protective Action Criteria for Chemicals**
Protective Action Criteria (PACs) are essential components for planning and response to uncontrolled releases of hazardous chemicals.

PAC-1:		
64-17-5	Ethanol	1,800 ppm
67-63-0	Isopropyl alcohol	400 ppm
PAC-2:		
64-17-5	Ethanol	3300* ppm
67-63-0	Isopropyl alcohol	2000* ppm
PAC-3:		
64-17-5	Ethanol	15000* ppm
67-63-0	Isopropyl alcohol	12000** ppm

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.See Section 13 for disposal information.

*Section 7: HANDLING AND STORAGE

· **Precautions for safe handling**
Keep away from heat, sparks and flame.
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.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
· **Information about protection against explosions and fires**:
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

Conditions for safe storage, including any incompatibilities
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a well-ventilated place.
Keep container tightly closed.
Store in the original container.
Keep away from any sources of heat or flame.
Store in a cool location.
· **Information about storage in one common storage facility:**
Not required.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

*Section 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Control parameters

Components with limit values that require monitoring at the workplace:	
64-17-5 Ethanol	
PEL	Long-term value: 1900 mg/m³, 1000 ppm
REL	Long-term value: 1900 mg/m³, 1000 ppm
TLV	Short-term value: 1000 ppm A3
67-63-0 Isopropyl alcohol	
PEL	Long-term value: 980 mg/m³, 400 ppm
REL	Short-term value: 1225 mg/m³, 500 ppm Long-term value: 980 mg/m³, 400 ppm
TLV	Short-term value: 400 ppm Long-term value: 200 ppm BEI, A4
Ingredients with biological limit values:	
67-63-0 Isopropyl alcohol	
BEI	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

Exposure controls
· **Appropriate engineering controls**
Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. Where acceptable concentrations cannot be maintained by general mechanical ventilation, local exhaust ventilation is recommended.
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Ensure that washing facilities are available at the work place.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
· **Breathing equipment:**



NIOSH/OSHA or EN approved respiratory protection is recommended for use in airborne concentrations exceeding exposure limits.

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).
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**



Protective gloves

Material of gloves
Butyl rubber, BR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Impervious protective clothing
· **Limitation and supervision of exposure into the environment**
Keep away from drains, surface and ground waters.
Avoid release into the environment.
None

*Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

· **General Information**	
· **Physical state**	Liquid
· **Color:**	Clear
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **Melting point/Melting range:**	Undetermined.
· **Boiling point/Boiling range:**	78–80 °C (172.4–176 °F)
· **Flammability:**	Highly flammable.
· **Explosion limits:**	
· **Lower:**	3.5 Vol %
· **Upper:**	15 Vol %
· **Flash point:**	14 °C (57.2 °F) (Closed Cup ASTM D56)
· **Auto igniting:**	425 °C (797 °F)
· **Decomposition temperature:**	Not determined.
· **pH-value:**	Not determined.
· **Viscosity:**	
· **Kinematic:**	Not determined.
· **Dynamic:**	1.13 cSt Not determined.
· **Solubility in / Miscibility with Water:**	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Vapor pressure at 20 °C (68 °F):**	59 hPa (44.3 mm Hg)
· **Vapor pressure at 50 °C (122 °F):**	280 hPa (210 mm Hg)
· **Density at 20 °C (68 °F):**	0.7896 g/cm³ (6.58921 lbs/gal)
· **Relative density**	Not determined.
· **Bulk density:**	790 kg/m³
· **Vapor density**	Not determined.
· **Particle characteristics**	Not applicable.

Other information

· **Appearance:**	
· **Form:**	Liquid
Important information on protection of health and environment, and on safety.	
· **Ignition temperature:**	Product is not self-igniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

Safety Data Sheet

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2024 and GHS. Rev 07.
Date of issue: 02/18/2025. Reviewed on 02/18/2025

Solvent content:

· **Organic solvents:**	100.0 %
· **VOC content:**	100.00 % 789.6 g/l / 6.59 lb/gal
· **Solids content:**	0.0 %

Change in condition

· **Oxidizing properties**	None
· **Evaporation rate**	Not determined.

*Section 10: STABILITY AND REACTIVITY

· **Reactivity**
The product is stable under normal conditions.
No further relevant information available.
· **Chemical stability** This material is considered stable at ambient temperatures 70 °C (21 °C).
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** Vapors may form explosive mixture with air.
· **Conditions to avoid**
High temperature and direct sunlight.
Heat, flame and ignition sources.
· **Incompatible materials:**
Alkali metals.
Strong oxidizing agents.
Peroxides.
· **Hazardous decomposition products:**
Upon decomposition, this product evolves carbon monoxide, carbon dioxide, and/or low weight hydrocarbons.

*Section 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects
· **Acute toxicity:**

LD/LC50 values that are relevant for classification:		
64-17-5 Ethanol		
Oral	LD50	7,060 mg/kg (rat) Remarks: Lungs, Thorax, or Respiration: Other changes. Carcinogenicity - Mouse - Oral Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors. Blood: Lymphomas including Hodgkin's disease. Central nervous system depression, narcosis, Damage to the heart., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Heart - Irregularities - Based on Human Evidence Central nervous system - Breathing difficulties - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence
Dermal	LD50	20,000 mg/kg (rabbit)
Inhalative	LC50/4 h LC50/96 hours	124.7 mg/l (rat) 12,900–15,300 Mg/l (trout)
67-63-0 Isopropyl alcohol		
Oral	LD50	4,710–5,840 mg/kg (rat)
Dermal	LD50	12,870 mg/kg (rabbit)
Inhalative	LC50/4 h LC50/96 hours	72.6 mg/l (rat) 9,640 Mg/l (Pimephales)

Primary irritant effect:
· **on the skin:** No irritant effect.
· **on the eye:** May be irritating
· **Sensitization:** No sensitizing effects known.
· **Carcinogenicity** May cause cancer.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
· **Interactive effects** No interactive effects between components are known.

Carcinogenic categories
· **IARC (International Agency for Research on Cancer)**
The IARC (the International Agency for Research on Cancer) concluded that ethanol found alcoholic beverages to be Group 1 - Carcinogenic to humans. All other instances it is not consider carcinogenic.
Group 1 - Carcinogenic to humans
Group 2A - Probably carcinogenic to humans
Group 2B - Possibly carcinogenic to humans
Group 3 - Not classifiable as to its carcinogenicity to humans
Group 4 - Probably not carcinogenic to humans

64-17-5	Ethanol	1
67-63-0	Isopropyl alcohol	3

NTP (National Toxicology Program)
None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

· **Alternative sources for toxicological information**
No non-standard sources for toxicological information where used.

*Section 12: ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity:	
64-17-5 Ethanol	
EC50	34,900 mg/kg (daphnia)
67-63-0 Isopropyl alcohol	
EC50	5,102 mg/kg (Water flea) 6,851 mg/kg (Green algae)

· **Persistence and degradability** No further relevant information available.
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
Other adverse effects
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Observe all federal, state and local environmental regulations when disposing of this material.
· **Waste disposal key:** US EPA RCRA waste code D001 (ignitability characteristic).
· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

*Section 14: TRANSPORTATION INFORMATION

UN-Number · **DOT, IMDG, IATA**	UN1987
UN proper shipping name · **DOT** · **IMDG** · **IATA**	Alcohols, n.o.s. (Ethanol, Isopropanol) ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ISOPROPANOL (ISOPROPYL ALCOHOL)) Alcohols, n.o.s. (ETHANOL, ISOPROPANOL (ISOPROPYL ALCOHOL))
Transport hazard class(es) · **DOT**  · **Class** · **Label**	3 Flammable liquids 3
IMDG, IATA · **Class** · **Label**	3 Flammable liquids 3
Packing group · **DOT, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
Transport/Additional information: · **DOT** · **Quantity limitations**	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
IMDG · **Limited quantities (LQ)** · **Excepted quantities (EQ) Code:**	1L E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

· **Special precautions for user**	Warning: Flammable liquids
· **Hazard identification number (Kemler code):**	33
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **UN "Model Regulation":**	UN 1987 ALCOHOLS, N.O.S. (ETHANOL (ETHYL ALCOHOL), ISOPROPANOL (ISOPROPYL ALCOHOL)), 3, II

*Section 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
67-63-0 Isopropyl alcohol

· **TSCA (Toxic Substances Control Act):**
All components have the value ACTIVE.

· **Hazardous Air Pollutants**
None of the ingredients is listed.

Proposition 65
· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**



WARNING: This product can expose you to chemicals including [one or more listed chemical] which is [are] known to the State of California to cause cancer [or birth defects or other reproductive harm]. For more information, go to www.P65Warnings.ca.gov.

64-17-5 Ethanol

· **New Jersey Right-to-Know List:**
All ingredients are listed.

· **New Jersey Special Hazardous Substance List:**

64-17-5	Ethanol	CA, MU, TE, F3
67-63-0	Isopropyl alcohol	F3

· **Pennsylvania Right-to-Know List:**
All ingredients are listed.

· **Pennsylvania Special Hazardous Substance List:**

67-63-0	Isopropyl alcohol	E

Carcinogenic categories
· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

64-17-5	Ethanol	A3
67-63-0	Isopropyl alcohol	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**



GHS02 GHS08

· **Signal word** Danger
· **Hazard-determining components of labeling:** Ethanol
· **Hazard statements**
Highly flammable liquid and vapor.
May cause cancer.
· **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground / bond container and receiving equipment.
Use explosion-proof [electrical/ventilating/lighting] equipment.
Use non-sparking tools.
Take action to prevent static discharge.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF exposed or concerned: Get medical advice/attention.
In case of fire: Use CO2, powder or water spray to extinguish.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
National regulations:
· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

Section 16: OTHER INFORMATION

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.
The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not
establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.
· **SDS created by:** Access GHS, LLC - 888-363-4870 - Team@access-ghs-sds.com
· **Date of previous version** 01/24/2025
· **Version number of previous version:** 1
· **Date of preparation** 02/18/2025
· **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flammable liquids 2: Flammable liquids – Category 2
Eye irritation 2A: Serious eye damage/eye irritation – Category 2A
Carcinogenicity 1A: Carcinogenicity – Category 1A
Specific target organ toxicity (single exposure) 3: Specific target organ toxicity (single exposure) – Category 3
· *** Data compared to the previous version altered.**