



**SECTION 1: IDENTIFICATION**

**1.1 Product Identifier** Trade Name – Dine-a-Heat®, Ethanol Gel

**1.2 Common Names or Synonyms** Green fuel

**1.3 Recommended use of the chemical & restrictions on use** Food Warming Fuel

**1.4 Supplier's name, address & telephone** Dine-a-Heat®  
Le-Jo Enterprises, Inc.  
765 Pike Springs Road  
Phoenixville, PA 19460  
484-921-9000  
www.lejo.com

**1.5 Supplier's emergency phone number** CHEMTREC 800-424-9300 – NORTH AMERICA  
CHEMTREC 703-527-3887 - WORLDWIDE



**SECTION 2: HAZARD(S) IDENTIFICATION**

**2.1 Hazard classification of the substance/mixture**

**Word**

**Symbol**

Danger



**GHS02 Flame**

H228 Flammable Solid

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

**2.2 Signal word and label elements**

Highly Flammable



R11 Highly Flammable

**Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

**Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

**2.3 Hazard statements**

See above

Precautionary statements & responses:

**2.4 Other hazards/statements**




- P101: If medical advice is needed, have product container or label at hand
- P102: Keep out of reach of children
- P103: Read label before use
- P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking
- P280: Wear eye/face protection
- P235: Keep cool



# Safety Data Sheet according to Globally Harmonized System (GHS)



- P361: Remove/Take off immediately all contaminated clothing
- P370 + P378 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray
- P403 + P233: Store in a well-ventilated place, keep container tightly closed







<b>WHMIS – symbols</b>	
<b>B4</b>	
	
<b>NFPA ratings (scale 0-4)</b>	
	<b>Health</b> = 2 <b>Fire</b> = 3 <b>Reactivity</b> = 0
<b>HMIS ratings (scale 0-4)</b>	
	Health = 2 Fire = 3 Reactivity = 0

**HMIS long term health hazard substances**

64-17-5 ethanol

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Information of chemical ingredients; mixtures; trade secret claims

ethanol	2-methylpropan-2-ol
<b>CAS</b> 64-17-5	<b>CAS</b> 75-65-0
<b>EINECS</b> 200-578-6	<b>EINECS</b> 200-889-7
<b>Index #</b> 603-002-00-5	<b>Index #</b> 603-005-00-1
<b>Hazard</b>  F R11	<b>Hazard</b>  Xn R20;  Xi R36/37;  F R11
<b>Toxicity</b>  Flam. Liq. 2, H225	<b>Toxicity</b>  Acute Tox. 4, H332; eye irrit. 2, H319; STOT SE 3, H335
<b>Weight</b> >50%	<b>Weight</b> <1,0%

## SECTION 4: FIRST AID MEASURES

### 4.1 Important symptoms/effects, acute & delayed

headache, dizziness, thirst, gastric or intestinal disorders, unconsciousness

### 4.2 Required Treatments

**Eye contact** Remove contact lenses if worn, flush open eye for several minutes, if problems persist, consult a doctor

**Skin contact** Generally the product does not irritate the skin

**Inhalation** Supply fresh air, consult a doctor in case of complaints



<b>Indication of Immediate Medical Attention &amp; Special Treatment</b>	<b>Ingestion</b>	Call for medical help immediately, rinse out mouth and then drink plenty of water, do not induce vomiting
		No further relevant information available

**SECTION 5: FIREFIGHTING MEASURES**

<b>5.1 Suitable (&amp; unsuitable) extinguishing methods</b>	Suitable: CO <sub>2</sub> , powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
<b>5.2 Specific hazards arising from the chemical</b>	No further relevant information available
<b>5.3 Special protective equipment &amp; precautions for firefighters</b>	<ul style="list-style-type: none"> <li>• In the event of fire, wear self-contained breathing apparatus</li> <li>• Wear fully protective suit</li> <li>• Cool endangered receptacles with water spray</li> </ul>

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

<b>6.1 Personal &amp; environmental precautions, protective equipment &amp; emergency procedures</b>	<p><b>Personal:</b></p> <ul style="list-style-type: none"> <li>• Keep away from ignition sources</li> <li>• Wear protective equipment, keep unprotected persons away</li> </ul> <p><b>Environmental:</b></p> <ul style="list-style-type: none"> <li>• Do not allow to enter sewers/surface or ground water</li> <li>• Ensure adequate ventilation</li> <li>• See section 7 for information on safe handling</li> <li>• See section 8 for information on personal protection equipment</li> <li>• See section 13 for information on disposal information</li> </ul>
<b>6.2 Methods &amp; materials for containment &amp; cleanup</b>	


**SECTION 7: HANDLING & STORAGE**

<b>7.1 Safe handling &amp; storage precautions, including incompatibilities</b>	<b>Safe handling advice</b>	<ul style="list-style-type: none"> <li>• Keep ignition sources away – do not smoke</li> <li>• Protect against electrostatic charges</li> <li>• Protect from heat</li> </ul>
	<b>Storage/Transport pressure</b>	<ul style="list-style-type: none"> <li>• Store in cool, dry place</li> <li>• Store in tightly closed receptacles</li> <li>• Protect from heat and direct sunlight</li> </ul>

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

<b>8.1 Control parameters based on OSHA's permissible exposure limits (PEL's) &amp; OSHA's threshold limit values (TLV's)</b>		<b>64-17-5 ethanol</b>
	PEL (USA)	1900 mg/m <sup>3</sup> , 1000 ppm
	REL (USA)	1900 mg/m <sup>3</sup> , 1000 ppm
	TLV (USA)	Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm
	EL (Canada)	Short-term value: 1000 ppm
	EV (Canada)	1,900 mg/m <sup>3</sup> , 1,000 ppm
		<b>75-65-0 2-methylpropan-2-ol</b>
	PEL (USA)	300 mg/m <sup>3</sup> , 100 ppm



	REL (USA)	Short-term value: 450 mg/m <sup>3</sup> , 150 ppm Long-term value: 300 mg/m <sup>3</sup> , 100 ppm
	TLV (USA)	303 mg/m <sup>3</sup> , 100 ppm
	EL (Canada)	100 ppm
	EV (Canada)	Short-term value: 150 ppm Long-term value: 100 ppm
<b>8.2 Appropriate engineering controls</b>	N/A	
	<b>General</b>	Wash hands before breaks and at the end of work
	<b>Eyes</b>	Safety Glasses 
<b>8.3 Personal protection measures, protective equipment recommendations &amp; exposure controls</b>	<b>Respiratory</b>	Not required
		<ul style="list-style-type: none"> <li>The glove material has to be impermeable and resistant to the product/ the substance/ the preparation</li> <li>Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture</li> <li>Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation</li> </ul>
	<b>Hands</b>	<ul style="list-style-type: none"> <li><b>Glove Material</b> - 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 cannot be calculated in advance and has therefore to be checked prior to the application</li> <li><b>Penetration time of glove material</b> - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed</li> </ul>

**SECTION 9: PHYSICAL & CHEMICAL PROPERTIES**

**9.1 Physical & chemical properties**

<b>Form</b>	Highly viscous
<b>Color</b>	pink
<b>Odor</b>	Alcohol-like
<b>Odor threshold</b>	Not determined
<b>pH-Value at 20°C</b>	8,0 ± 0,5
<b>Melting point/Melting range</b>	undetermined
<b>Boiling point/Boiling range</b>	169 °F / 76 °C
<b>Flash point</b>	54 °F / 12 °C
<b>Flammability (solid, gaseous)</b>	Highly flammable
<b>Ignition temperature</b>	846 °F / 452 °C (745 mm Hg / 980.3 mbar)
<b>Decomposition temperature</b>	Not determined
<b>Self-igniting</b>	Product is not self-igniting



<b>Danger of explosion</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible
<b>Explosion limits – Lower</b>	3,5 Vol %
<b>Explosion limits - Upper</b>	15,0 Vol %
<b>Vapor pressure at 20 °C</b>	59 hPa
<b>Density at 20 °C</b>	0.8 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined
<b>Vapor density</b>	N/A
<b>Evaporation rate</b>	N/A
<b>Solubility in/Miscibility with water</b>	Partly soluble
<b>Partition coefficient (n-octanol/water)</b>	Not determined
<b>Viscosity – Dynamic</b>	N/A
<b>Viscosity - Kinematic</b>	N/A

**SECTION 10: STABILITY & REACTIVITY**

<b>10.1 Lists chemical stability &amp; possibility of hazardous reactions</b>	<ul style="list-style-type: none"> <li>No decomposition if stored &amp; applied as directed</li> <li>Reacts with strong oxidizing agents</li> </ul>
<b>10.2 Conditions to avoid</b>	No further relevant information
<b>10.3 Incompatible materials</b>	No further relevant information
<b>10.4 Hazardous decomposition products</b>	Carbon monoxide & carbon dioxide

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Routes of exposure; related symptoms, acute & chronic effects, numeral measures of toxicity**

**Acute toxicity**

**LD/LC50 values relevant for classification**

	<b>64-17-5 ethanol</b>		<b>75-65-0 2-methylpropan-2-ol</b>	
<b>Oral</b>	LD50	7060 mg/kg (rat)	<b>oral</b>	LD50 3500 mg/kg (rat)
<b>Inhalative</b>	LC50/4h	20000 mg/l (rat)		

**Primary irritant effect**

**Skin** None

**Eyes** None

**Sensitization** No effects known

**Additional toxicological information** Vapors have narcotic effect

**SECTION 12: ECOLOGICAL INFORMATION**

**12.1 Ecological Information**

**Aquatic toxicity** No further relevant information available

**Biodegradation** Biodegradable

**Bioaccumulation** Does not accumulate in organisms

**Mobility in soil** No further relevant information available

**Additional ecological info**

- Water hazard class 1 (German Regulation) (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**

**13.1 Disposal Considerations**



# Safety Data Sheet according to Globally Harmonized System (GHS)

**Waste Code**

- Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations
- Must not be disposed together with household garbage
- Do not allow product to reach sewage system

**Disposal methods**

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

**Un-cleaned packaging**

Dispose of only in accordance with local, state, and federal regulations. Clean with water & if necessary a cleansing agent

**SECTION 14: TRANSPORT INFORMATION****14.1 Transport Information**

**UN-Number – DOT, ADR, IMDG, IATA** UN1325

**UN proper shipping name**



Limited Quantity for packages less than 30 kg (66 lb.) and inner packagings less than 1.0 kg (2.2 pounds)

**DOT, ADR, IMDG, IATA** 1325 FLAMMABLE SOLID, ORGANIC, N.O.S. – (ETHANOL)

**Transport hazard class(es)**

**Label**

**Class**

**DOT**



4.1 Flammable solids, self-reactive substances and solid desensitized explosives

**Label 4.1**

**ADR**



4.1 (F1) Flammable solids, self-reactive substances and solid desensitized explosives.

**Label 4.1**

**IMDG, IATA**



4.1 Flammable solids, self-reactive substances and solid desensitized explosives.

**Label 4.1**

**Packing group - DOT, ADR, IMDG, IATA**

II

**Environmental hazards - Marine pollutant**

No

**Special precautions for user**

Warning: Flammable solids, self-reactive substances & solid desensitized explosives.

**Danger code (Kemler)**

33

**EMS Number**

F-A-, S-G

**Transport in bulk according to Annex II of - MARPOL73/78 and the IBC Code**

N/A

**Transport/Additional Information**

**ADR**

**Limited Quantities (LQ)**

1 kg

**Transport Category**

2

**Tunnel restriction code**

E

**UN "Model Regulation"**

UN1325, FLAMMABLE SOLID, ORGANIC, N.O.S., 4.1, II

**SECTION 15: REGULATORY INFORMATION**



### 15.1 US Federal Regulations

#### Section 355 (extremely hazardous substances):

None of the ingredients is listed.

#### Section 313 (Specific toxic chemical listings):

75-65-0 2-methylpropan-2-ol

#### TSCA (Toxic Substances Control Act):

All ingredients are listed.

#### Proposition 65 (California):

##### 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:

64-17-5 ethanol

#### Carcinogenic Categories

##### EPA (Environmental Protection Agency)

None of the ingredients is listed.

##### IARC (International Agency for Research on Cancer)

64-17-5 ethanol

##### TLV (Threshold Limit Value established by ACGIH)

64-17-5 ethanol

75-65-0 2-methylpropan-2-ol

##### NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

##### OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

#### Canada

##### Canadian Domestic Substances List (DSL)

All ingredients are listed.

##### Canadian Ingredient Disclosure list (limit 0.1%)

64-17-5 ethanol

##### Canadian Ingredient Disclosure list (limit 1%)

75-65-0 2-methylpropan-2-ol

### SECTION 16: OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### Relevant phrases:

H225 Highly flammable liquid and vapor

H319 Causes serious eye irritation

H332 Harmful if inhaled

H335 May cause respiratory irritation

R11 Highly flammable

R20 Harmful by inhalation

R36/37 Irritating to eyes and respiratory system

#### Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the

International Carriage of Dangerous Goods by Road)



## Safety Data Sheet according to Globally Harmonized System (GHS)



IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
ACGIH: American Conference of Governmental Industrial Hygienists  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent