



SECTION 1: IDENTIFICATION

1.1 Product Identifier	Trade Name – Dine-a-Heat®, Ethanol Gel
1.2 Common Names or Synonyms	Gel 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

Flame



GHS02 Flame

H228 Flamable 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: CO₂, powder or water spray
- P403 + P233: Store in a well-ventilated place, keep container tightly closed

NFPA ratings (scale 0-4)



Health = 2

Fire = 3

Reactivity = 0

HMIS ratings (scale 0-4)



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

SECTION 4: FIRST AID MEASURES

4.1 Important symptoms/effects, acute & delayed

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

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

Ingestion

Call for medical help immediately, rinse out mouth and then drink plenty of water, do not induce vomiting

4.2 Required Treatments

Indication of Immediate Medical Attention & Special Treatment

No further relevant information available



SECTION 5: FIREFIGHTING MEASURES

5.1 Suitable (& unsuitable) extinguishing methods

Suitable: CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Specific hazards arising from the chemical

No further relevant information available

5.3 Special protective equipment & precautions for firefighters

- In the event of fire, wear self-contained breathing apparatus
- Wear fully protective suit
- Cool endangered receptacles with water spray

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal & environmental precautions, protective equipment & emergency procedures

Personal:

- Keep away from ignition sources
- Wear protective equipment, keep unprotected persons away

Environmental:

- Do not allow to enter sewers/surface or ground water
- Ensure adequate ventilation
- See section 7 for information on safe handling
- See section 8 for information on personal protection equipment
- See section 13 for information on disposal information

6.2 Methods & materials for containment & cleanup

SECTION 7: HANDLING & STORAGE

7.1 Safe handling & storage precautions, including incompatibilities

Safe handling advice

Storage/Transport pressure

- Keep ignition sources away – do not smoke
- Protect against electrostatic charges
- Protect from heat
- Store in cool, dry place
- Store in tightly closed receptacles
- Protect from heat and direct sunlight

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters based on OSHA's permissible exposure limits (PEL's) & OSHA's threshold limit values (TLV's)

64-17-5 ethanol

PEL (USA)	1900 mg/m ³ , 1000 ppm
REL (USA)	1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm
EL (Canada)	Short-term value: 1000 ppm
EV (Canada)	1,900 mg/m ³ , 1,000 ppm

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

PEL (USA)	300 mg/m ³ , 100 ppm
REL (USA)	Short-term value: 450 mg/m ³ , 150 ppm Long-term value: 300 mg/m ³ , 100 ppm
TLV (USA)	303 mg/m ³ , 100 ppm
EL (Canada)	100 ppm
EV (Canada)	Short-term value: 150 ppm Long-term value: 100 ppm



8.2 Appropriate engineering controls

N/A

General Wash hands before breaks and at the end of work

Eyes  Safety Glasses

Body Light weight protective clothing

Respiratory Not required

- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation
- Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Glove Material** - 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
- **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

8.3 Personal protection measures, protective equipment recommendations & exposure controls

Hands

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

9.1 Physical & chemical properties

Form	Highly viscous
Color	pink
Odor	Alcohol-like
Odor threshold	Not determined
pH-Value at 20°C	8,0 ± 0,5
Melting point/Melting range	undetermined
Boiling point/Boiling range	169 °F / 76 °C
Flash point	54 °F / 12 °C
Flammability (solid, gaseous)	Highly flammable
Ignition temperature	846 °F / 452 °C (745 mm Hg / 980.3 mbar)
Decomposition temperature	Not determined
Self-igniting	Product is not self-igniting
Danger of explosion	Product is not explosive. However, formation of explosive air/vapor mixtures are possible
Explosion limits – Lower	3,5 Vol %
Explosion limits - Upper	15,0 Vol %
Vapor pressure at 20 °C	59 hPa



Density at 20 °C	0.8 g/cm ³
Relative density	Not determined
Vapor density	N/A
Evaporation rate	N/A
Solubility in/Miscibility with water	Partly soluble
Partition coefficient (n-octanol/water)	Not determined
Viscosity – Dynamic	N/A
Viscosity - Kinematic	N/A

SECTION 10: STABILITY & REACTIVITY

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

	64-17-5 ethanol		75-65-0 2-methylpropan-2-ol	
Oral	LD50	7060 mg/kg (rat)	oral	LD50 3500 mg/kg (rat)
Inhalative	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

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

H331 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)

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)



Safety Data Sheet according to Globally Harmonized System (GHS)



WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent