



## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY INFORMATION

**Product Name:** Ecoflame Warming and Cooking Gel  
**Chemical Family:** Alcohol Gel  
**Manufacturer:** Ecoflame International Inc.  
2120 Queen Street East, Suite 300, Toronto, ON M4E 1E2  
**Phone Number:** (416) 694-7587  
**24-hour Emergency:** In USA: CHEMTREC: (800) 424-9300  
In Canada: CANUTEC: (613) 996-6666  
In Europe: CHEMTREC (703) 527-3887 (Collect Calls Accepted)

### 2. COMPOSITION AND INGREDIENT INFORMATION

Common Name	Chemical Name	CAS No.	EINECS / ELINCS	Wt. %	Symbol	R Phrases
Sugar Cane Ethanol	Ethanol	64-17-5	200-578-6	70-80	F	R:11
Bitrex	Denatonium Benzoate	3734-33-6		Trace		

Note: See Section 8 of this MSDS for exposure limit data for these ingredients. See Section 16 for the full text of the R-phrases above.

### 3. HAZARDS IDENTIFICATION

**Hazards:** Flammable. Irritating to the eyes.  
**Appearance, Colour and Odour:** Transparent, colourless gel, alcohol odour  
**Primary Route(s) of Exposure:** Skin, Inhalation

#### Potential Health Effects:

**ACUTE (short term):** See Section 8 for exposure controls.

**Eyes:** Direct contact is irritating to eyes. High vapour concentrations may cause mild irritation.

Because of the gel state of this product, direct contact with eyes is unlikely.

**Skin:** Direct contact may cause mild irritation.

**Inhalation:** No acute effects are expected. Products of combustion are not expected to be harmful.

**Ingestion:** Not a likely route of exposure. Ingestion of ethanol causes depression of the central nervous system with symptoms such as lack of coordination, impaired vision, reduced reaction time, slurred speech, impaired judgement, nausea/vomiting and unconsciousness when ingested in large amounts.

**CHRONIC (long term):** See Section 11 for additional toxicological data.

**Sensitisation:** Not sensitizing.

**Teratogenicity:** Not applicable.\*

**Reproductive Toxicity:** Not applicable.\*

**Mutagenicity:** Not applicable.\*

**Toxicologically Synergistic Materials:** Not applicable.\*

\* Prolonged or repeated exposure to ethanol through ingestion or inhalation has known chronic effects however, it is very unlikely that this product will be ingested or inhaled in harmful amounts when used for its intended purpose.

**Medical Conditions Aggravated by Exposure:** Not available

#### 4. FIRST AID MEASURES

**Inhalation:** Remove affected person to fresh air. If not breathing give artificial respiration. Obtain medical attention if symptoms persist or if breathing is affected.

**Eye Contact:** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes, or until the chemical is removed, while holding the eyelid(s) open. Obtain medical attention if irritation persists.

**Skin Contact:** No health effects expected. If contact occurs, flush with lukewarm, gently flowing water for 5 minutes or until the chemical is removed.

**Ingestion: DO NOT INDUCE VOMITING.** NEVER give anything by mouth if the victim is rapidly losing consciousness, is unconscious or is convulsing. Have victim drink 240 to 300 mL (8 to 10 oz.) of water to dilute material in the stomach. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Obtain medical attention immediately.

#### 5. FIRE FIGHTING MEASURES

**Flash Point and Method (°C):**

N/A

**Flammability Limits (%):**

N/A

**Auto Ignition Temperature (°C):**

425°C (797°F)

**Extinguishing Media:** For small fires, use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. For large fires, use carbon dioxide, dry chemical powder, alcohol-resistant foam or polymer foam. Water may be ineffective because it will not cool the alcohol below its flash point. Use water spray to cool fire-exposed containers

**Unusual Fire and Explosion Hazards:** Closed cans exposed to flame and heat may rupture violently, scattering burning fragments.

**Sensitivity to Static Discharge:** Mixtures of ethanol vapour and air at concentrations in the flammable range may be ignited by a static charge of sufficient energy.

**Sensitivity to Mechanical Impact:** Not sensitive

**Fire Fighting Instructions:** Self-contained breathing apparatus and protective clothing should be worn when fighting ethanol fires. Do not use a high-pressure stream of water to extinguish burning materials.

**Hazardous Combustion Products:** In conditions where there is insufficient oxygen and burning is slow and incomplete, combustion may produce carbon monoxide.

**Other Flammability Information:** Not available

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Wear protective equipment and ventilate the area.

**Air Release:** Shut off or extinguish all sources of ignition. Ventilate the area.

**Land Spill:** Shut off or extinguish all sources of ignition. Immediately soak spilled material with water. Soak up spill with absorbent material which does not react with spilled chemical.

Put material in suitable, covered, labelled containers. Prevent any runoff from entering sewers or waterways. Contaminated absorbent material may pose the same hazards as the spilled product.

**Water Spill:** Not available

#### 7. HANDLING AND STORAGE

**Storage Temperature:** Store in a cool place.

**Storage Pressure:** Not available

**General:** Store in a cool place away from heat and ignition sources, and out of direct sunlight. Keep containers closed when not in use. Provide access aisles between each two rows of pallets or eight boxes. Check for signs of spillage or leakage. Packages presenting problems should be immediately removed. Do not ingest. Avoid contact with skin and eyes. Keep away from children. Keep away from combustible items like paper napkins and plates. Before lighting the can of fuel, place the can in a fuel holder or under the chafer dish first. Ensure that the can is in a level, upright position.

#### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredient	ACGIH TLV (8-hr. TWA)	U.S. OSHA PEL (8-hr. TWA)	Ontario (Canada) TWA EV	UK OEL (8-hr. TWA)
Ethanol	1000 ppm (1000 ppm)	1900 mg/m <sup>3</sup> (1000 ppm)	1900 mg/m <sup>3</sup> (1000 ppm)	1920 mg/m <sup>3</sup>

**Engineering Controls:** Provide adequate ventilation to keep vapour concentrations below the exposure limits listed above. When there is large scale use of this material, local exhaust ventilation with or without process enclosure may be necessary. Use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems.

**Hygiene Measures:** Avoid contact with skin and eyes. Keep container tightly closed when not in use.

**Personal Protective Equipment:**

**Respiratory Protection:** Not required for normal use. NIOSH approved respirator for organic vapours in high vapour concentrations.

**Skin Protection:** Not required for normal use. Wear rubber, Viton® or 4H® protective gloves to prevent repeated and/or prolonged skin contact.

**Eye Protection:** Not required for normal use.

Wear chemical safety goggles when exposure may be prolonged or if handling large quantities of the gel.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Solid, gel  
**Vapour Pressure (mm Hg @ 20°C):** Not available  
**Appearance:** Transparent, colourless gel  
**Vapour Density (Air = 1):** Not available  
**pH:** 6.5 - 7.0  
**Solubility in Water:** Slight  
**Specific Gravity (water = 1):** Not available  
**Water / Oil distribution coefficient:** Not available  
**Boiling Point:** Not available  
**Odour Type:** Alcohol  
**Freezing Point:** Not available  
**Evaporation Rate (n-Butyl Acetate = 1):** Not available  
**Viscosity:** Not available

## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal temperature and pressure.  
**Incompatible Materials and Conditions to Avoid:**  
Avoid heat and open flames. Avoid contact with the following incompatible materials: Strong oxidizing agents, acids, ammonia, hydrazine, peroxides, sodium, potassium acid anhydrides, perchloric acid and metal perchlorates, silver nitrate, mercuric nitrate, potassium-tert-butoxide, acid chlorides.  
**Hazardous Decomposition Products:** None known  
**Hazardous Polymerization:** Does not occur.  
**Other Reactivity Concerns:** None

## 11. TOXICOLOGICAL INFORMATION

**Carcinogenicity:** The table below indicates whether or not each agency has listed each ingredient as a carcinogen.

Ingredient	ACGIH	IARC	NTP
Ethanol	A4	Not listed*	Not listed
	Not Classifiable as a Human Carcinogen		

\* Occupational exposure to ethanol has not been associated with carcinogenicity.

### Acute Toxicity Data:

Ingredient	LD50 Oral (mg/kg)	LD50 Dermal (mg/kg)	LC50 Inhalation (mg/m <sup>3</sup> , 4 hrs.)
Ethanol	7060 (rat)	Not available	39 000 (mouse)

## 12. ECOLOGICAL INFORMATION

**General:** When released into water ethanol will volatilize and biodegrade quickly. Ethanol is not expected to bio-concentrate or absorb to aquatic sediments.

## 13. DISPOSAL CONSIDERATIONS

### Waste Disposal Method:

DO NOT dump into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage.

**USA:** US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Dispose of in accordance with local, state and federal laws and regulations.

**Canada:** Dispose of in accordance with local, provincial and federal laws and regulations.

**EU:** Waste must be disposed of in accordance with relevant EU Directives and national, regional and local environmental control regulations. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

## 14. TRANSPORT INFORMATION

### U.S. Hazardous Materials Regulation (DOT 49CFR)

As packaged this material can be shipped as a "Consumer Commodity ORM-D" Exemption. Shipments from the US going to Canada may transport as per 49 CFR (TDG Section 9.1)

**DOT:** FLAMMABLE SOLID, ORGANIC, N.O.S. (Ethanol), 4.1, UN1325, III

**Reportable Quantity for US Shipments:** None

**DOT Special Provisions:** A1, IB8, IP2, IP4, T3, TP1

**DOT Packaging Exceptions:** 173.151

**DOT Non-bulk Packaging:** 173.212

**DOT Bulk Packaging:** 173.240

### Canadian Transportation of Dangerous Goods (TDG):

As packaged this material can be shipped as a "Consumer Commodity" as per part 1.17 of the TDG Regulations. Shipments from Canada to the US may transport as per TDG Regulations (49 CFR Part 171.12a).

**TDG:** FLAMMABLE SOLID, ORGANIC, N.O.S. (Ethanol), Class 4.1, UN1325, PG III

**ADR/RID:** FLAMMABLE SOLID, ORGANIC, N.O.S. (Ethanol), 4.1, UN1325, III

**IMDG:** FLAMMABLE SOLID, ORGANIC, N.O.S. (Ethanol), 4.1, UN1325, III

**Marine Pollutants:** Not applicable

**ICAO/IATA:** FLAMMABLE SOLID, ORGANIC, N.O.S. (Ethanol), 4.1, UN1325, III

### IATA Packing Instructions:

Passenger/Cargo: 419

Cargo Only: 420

Limited Quantity: Y419

### Maximum Net Quantity per Package:

Passenger/Cargo: 25 kg

Cargo Only: 100 kg

Limited Quantity: 10 kg

## 15. REGULATORY INFORMATION

### HMIS and NFPA Hazard Rating:

Category	HMIS	NFPA
Acute Health	1	1
Flammability	3	3
Reactivity	0	0

### USA

**TSCA Status:** Ethanol is listed on the TSCA inventory.

**SARA Title III:** Ethanol, CAS # 64-17-5:

acute, chronic, flammable

**Sec. 313:** Not applicable

**CERCLA:** Not applicable

**Right to Know:** Ethyl alcohol can be found on the following state right to know lists:

California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

**Clean Air Act:** Not applicable

**Clean Water Act:** Not applicable

### CANADA

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

### WHMIS Classification:

B4 – Flammable Solid

D2B – Material Causing Other Toxic Effects (toxic)

Eye irritation

### NSNR Status

**(New Substance Notification Regulations):**

Ethanol is listed, as required, on Canada's Domestic Substances List.

### NPRI Substances

**(National Pollutant Release Inventory):**

There are no NPRI reportable ingredients.

### EU

### Classification:

**Symbol:** Flammable

**Risk Phrases:** R:11 Flammable

### Safety Phrases:

S:(2-)7-16 Keep out of reach of children.

Keep container tightly closed.

Keep away from sources of ignition - No smoking.

## 16. OTHER INFORMATION

### Full Text of R-phrases appearing in Section 2:

R11 - Flammable

### Text of classifications appearing in Section 2:

F - Flammable

### Preparation Information:

#### Preparation date:

April 28, 2009

### Manufacturer Disclaimer:

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