

MATERIAL SAFETY DATA SHEET

Section 1. Product and Company Identification

Chemical Name: Squeeze'N Light Fire Starter Gel (Ethanol-based)
Manufacturer: Kel Kem Ltd.
#3 – 1333 Cornwall Road
Oakville, Ontario L6J 7T5
Tel: (905) 829-5888
Fax: (905) 829-3247
Canutec 24 Hour Emergency Tel: (613) 996-6666 (Collect)
Date: December 20, 2011
Prepared by: Gerry van Konynenburg
WHMIS Classification: Class B-2: Flammable liquid; Class D-2B: Material causing other toxic effects (Toxic).
Product Use: Fire Accelerant
Product Code(s): CH0128, KK0291-A, KK0292-A

NOTE: Methanol-based products have been replaced by Ethanol-based products. Check the information on the package.

Section 2. Hazards identification

Emergency Overview

WARNING !

FLAMMABLE LIQUID AND VAPOR. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Flammable liquid. Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Avoid contact with skin and clothing. Contains material that may cause target organ damage, based on animal data. Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use.

Potential Acute Health Effects

See section 11 for more detailed information on health effects and symptoms.

Hazardous by the following route of exposure: of ingestion. Slightly hazardous by the following route of exposure: of skin contact (irritant), of eye contact (irritant), of inhalation. Non-corrosive to skin. Non-corrosive to the eyes.

Note to Physician Not Available

Section 3. Composition, information on ingredients

Name	CAS number	%
Ethanol	64-17-5	100

There are no ingredients or additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

Eye contact Immediately flush eyes with plenty of water for at least 60 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Skin contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation Get medical attention immediately. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Notes to physician No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5. Fire fighting measures

Products of combustion Decomposition products may include the following materials: carbon oxides

Fire-fighting media and instructions Use dry chemical, CO₂, water spray (fog) or foam.

Fire Hazards Not available.

Explosion Hazards Not available.

Section 6. Accidental release measures

Small spill and leak Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosionproof equipment. Dispose of via a licensed waste disposal contractor.

Large spill and leak Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and Storage

Handling Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls, personal protection

Engineering controls Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Personal protection

Eyes Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: splash goggles

Body Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

>8 hours (breakthrough time): nitrile rubber

Exposure limits

<p>Product name (Canada) - ethanol ACGIH TLV (Canada, 2003). TWA: 1000 ppb 8 hour(s).</p> <p>CA Alberta Provincial (Canada, 10/2006). 8 hrs OEL: 1000 ppm 8 hour(s). 8 hrs OEL: 1880 mg/m³ 8 hour(s).</p> <p>CA British Columbia Provincial (Canada, 7/2007). TWA: 1000 ppm 8 hour(s).</p> <p>CA Ontario Provincial (Canada, 3/2007). TWAEV: 1000 ppm 8 hour(s). TWAEV: 1900 mg/m³ 8 hour(s).</p> <p>CA Quebec Provincial (Canada, 12/2006). TWAEV: 1000 ppm 8 hour(s). TWAEV: 1880 mg/m³ 8 hour(s).</p>	<p>Product name (United States) - ethanol OSHA PEL (United States, 2003). TWA: 1000 ppm 8 hour(s).</p> <p>ACGIH TLV (United States, 1/2007). TWA: 1000 ppm 8 hour(s). TWA: 1880 mg/m³ 8 hour(s).</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s).</p> <p>NIOSH REL (United States, 12/2001). TWA: 1000 ppm 10 hour(s). TWA: 1900 mg/m³ 10 hour(s).</p> <p>OSHA PEL (United States, 11/2006). TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s).</p>
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Section 9. Physical and chemical properties

Physical State and Appearance	Liquid	Odour	Alcohol odour
Molecular weight	Not applicable	Taste	Bitter
PH	7 [Conc. (% w/w): 100%]	Colour	Clear
Boiling/condensation point	78°C (172.4°F)	Volatility	100% (w/w)
Melting/freezing point	Not available.	Evaporation rate	2.4 (Butyl acetate. = 1)

Relative density	0.79 to 0.81	Odour Threshold	Not available
Vapour Pressure	5.7 kPa (42.75 mm Hg)	Viscosity	Not available.
Vapour Density	1.59 [Air = 1]	Solubility	Easily soluble in the following materials: cold water, hot water and methanol.
VOC Content	790 (g/l).	Other Properties	Not available.
The product is:	Flammable.	Flash Point	Closed cup: 13°C (55.4°F)
Auto-ignition temperature	363°C (685.4°F)	Flammable limits	Not available
Fire hazards in the presence of various substances	Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. Highly flammable in the presence of the following materials or conditions: heat. Non-flammable in the presence of the following materials or conditions: oxidizing materials.		

Section 10. Stability and reactivity

Stability The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions of instability Not available.

Incompatibility with various substances Slightly reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.

Hazardous decomposition products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

LD50/LC50:

CAS# 64-17-5:

Draize test, rabbit, eye: 500 mg Severe;
 Draize test, rabbit, eye: 500 mg/24H Mild;
 Draize test, rabbit, skin: 20 mg/24H Moderate;
 Inhalation, mouse: LC50 = 39 gm/m³/4H;
 Inhalation, rat: LC50 = 20000 ppm/10H;
 Oral, mouse: LD50 = 3450 mg/kg;
 Oral, rabbit: LD50 = 6300 mg/kg;
 Oral, rat: LD50 = 7060 mg/kg;
 Oral, rat: LD50 = 9000 mg/kg;<BR.

Carcinogenicity: CAS# 64-17-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Ethanol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals. Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have collectively been termed the "fetal alcohol syndrome".

Teratogenicity: Oral, Human - woman: TDLo = 41 gm/kg (female 41 week(s) after conception) Effects on Newborn - Apgar score (human only) and Effects on Newborn - other neonatal measures or effects and Effects on Newborn - drug dependence.

Reproductive Effects: Intrauterine, Human - woman: TDLo = 200 mg/kg (female 5 day(s) pre-mating) Fertility - female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated).

Neurotoxicity: No information available.

Mutagenicity: DNA Inhibition: Human, Lymphocyte = 220 mmol/L.; Cytogenetic Analysis: Human, Lymphocyte = 1160 gm/L.; Cytogenetic Analysis: Human, Fibroblast = 12000 ppm.; Cytogenetic Analysis: Human, Leukocyte = 1 pph/72H (Continuous).; Sister Chromatid Exchange: Human, Lymphocyte = 500 ppm/72H (Continuous).

Other Studies: Standard Draize Test (Skin, rabbit) = 20 mg/24H (Moderate) Standard Draize Test: Administration into the eye (rabbit) = 500 mg (Severe).

Section 12. Ecological information

For accidental discharges into the environment, see Section 6:"Accidental Release Measures" for suggested instructions.

Environmental effects : No known significant effects or critical hazards.

Ecotoxicity: Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 Hr; Flow-through @ 24-24.3°C Fish: Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified) Bacteria: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox test When spilled on land it is apt to volatilize, biodegrade, and leach into the ground water, but no data on the rates of these processes could be found. Its fate in ground water is unknown. When released into water it will volatilize and probably biodegrade. It would not be expected to adsorb to sediment or bioconcentrate in fish.

Environmental: When released to the atmosphere it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.

Physical: No information available.

Other: No information available.

Section 13. Disposal considerations

Waste information: The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

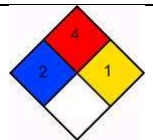
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. **Disposal should be in accordance with applicable regional, national and local laws and regulations.**

Section 14. Transport information

Canada TDG Classification		
Class	Class 3: Flammable liquid.	
Subsidiary class	-	
Proper Shipping Name (Canada) TDG	Alcohols, n.o.s. (ethanol)	
UN number	1987	
Packing Group	II	
Special provisions	In containers of 1 L (1Kg) capacity or less this product is classified as a "Limited Quantities" "Consumer Commodity" under TDG regulations.	
IMDG Classification		
Class	Class 3: Flammable liquid.	
Subsidiary class	-	
Proper Shipping Name IMDG	Alcohols, n.o.s. (ethanol)	
UN number	1987	
Packing Group	II	
Marine pollutant	Not a pollutant.	
Special provisions	Remarks In containers of 1 L (1Kg) capacity or less this product is classified as a "Limited Quantity" under IMDG regulations	
United States DOT Classification		
Class	Class 3: Flammable liquid	
Subsidiary class	-	
Proper Shipping Name (United States) DOT	Alcohols, n.o.s. (ethanol)	
UN number	1987	
Packing Group	II	
Special provisions	In containers of 1 L (1Kg) this product is qualified as a "consumer commodity" ORM-D under DOT	
International Air Transport Association (IATA)	For air shipment classification and associated regulations, please refer to the latest edition of IATA Dangerous Goods Regulations.	

Section 15. Regulatory information

WHMIS Classification (Canada)	Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).		
Canada Domestic Substances List (DSL)	This product and/ or all of its components are on the DSL.		
HCS Classification (U.S.A.)	Flammable liquid; Carcinogen; Target organ effects		
U.S.A. Regulatory Lists	This product and/ or all of its components are on the TSCA inventory list.		
Hazardous Material Information System (U.S.A.)	Health	2	National Fire Protection Association (U.S.A.)
	Flammability	4	
	Reactivity	1	
	Personal Protection	B	



Section 16. Other information

Notice to the Reader: The information is provided in good faith and is correct to the best of Kel Kem Ltd.'s knowledge as of the date hereof and is designed to assist our customers; however Kel Kem Ltd. makes no representation as to its completeness or accuracy. Final determination of suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Kel Kem Ltd. disclaims all expressed or implied warranties or representations.

**Prepared By: Gerry van Konynenburg
Preparation Date: December 20, 2011**

**Phone Number: (905) 829-5888
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