

**MSDS - Material Safety Data Sheet****Product Name: LIQUID FIRE STARTING FLUID**

MSDS No.: M3911

**I. Basic Information:****Manufacturer:** RADIATOR SPECIALTY COMPANY**Address:** 600 RADIATOR ROAD**City, ST Zip:** INDIAN TRAIL, NC 28079**Country:****Contact:** Robert Geer**Information Telephone Number:** 704-684--181 1**Emergency Contact:** Rocky Mountain Poision Control Center**Emergency Telephone Number:** 303-623-5716**Emergency Restrictions:****Product Name:** LIQUID FIRE STARTING FLUID**MSDS No.:** M3911**Issue Date:** 02/19/2009**Supersedes Date:** 02/11/2008**II. Hazards Identification:****EMERGENCY OVERVIEW**

DANGER: EXTREMELY FLAMMABLE. HARMFUL OR FATAL IF SWALLOWED. VAPOR TOXIC. EXCESSIVE INHALATION MAY BE FATAL. VAPORS MAY CAUSE FLASH FIRES. EYE IRRITANT. CONTENTS UNDER PRESSURE.

Level 3 Aerosol

**OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Potential Health Effects****Route(s) of Entry:**

Inhalation, eye and skin contact.

**Health Hazards (Acute and Chronic):**

See signs and symptoms below.

**Signs and Symptoms:**

Eye Contact: Direct spray or vapors will irritate and may harm eyes

Skin Contact: Product may cause irritation due to defatting of skin.

Inhalation: High concentrations of vapors may irritate nose and throat and cause symptoms of intoxication such as dizziness, nausea, headache, or indigestion.

Ingestion: Gastrointestinal irritation, nausea, cramps, diarrhea. May be harmful or fatal if swallowed..

**Medical Conditions Generally Aggravated by Exposure:**

None Known

**Other Health Warnings:**

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

**Potential Environmental Effects**

Not Available

**III. Composition/Information on Ingredients:**

Chemical Name	CAS No.	% Range	Trade Secret
Carbon dioxide	124-38-9	1.0 - 10.0	
Ethane, 1,1'-oxybis-	60-29-7	15.0 - 40.0	
Heptane	142-82-5	40.0 - 70.0	
Naphthenic Petroleum Distillate	64742-52-5	< 1.0	
Naphthenic Petroluem Oil	64742-53-6	< 1.0	

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### IV. First Aid Measures:

#### **Emergency and First Aid Procedures:**

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.

Inhalation: Remove to fresh air. If breathing becomes difficult get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

#### **Note to Physicians:**

N/E

### V. Fire Fighting Measures:

#### **Suitable Extinguishing Media:**

Foam, Dry Chemical (B-C), Carbon Dioxide

#### **Unsuitable Extinguishing Media:**

Do not use forced water stream as this could cause the fire to spread.

#### **Products of Combustion:**

Carbon dioxide, carbon monoxide, and various hydrocarbons

#### **Protection of Firefighters:**

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

### VI. Accidental Release Measures:

#### **Personal Precautions:**

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

#### **Environmental Precautions:**

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

#### **Methods for Containment:**

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

#### **Methods for Cleanup:**

Using a non-metallic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

#### **Other Information:**

All equipment used with handling the concentrate must be grounded. If run-off occurs, notify proper authorities as required that a spill has occurred.

### VII. Handling and Storage:

#### **Handling Precautions:**

Use with adequate ventilation and proper protective equipment.

Do not use or store near fire, sparks, open flame or heat sources. Do not puncture or incinerate container. Exposure to temperatures above 120° may cause container to vent, rupture, or burst. Store in a cool, dry place, out of direct sunlight.

#### **Storage Precautions:**

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

### VIII. Exposure Controls/Personal Protection:

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Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Ethane, 1,1'-oxybis-	400 ppm	400 ppm	Not Available
Heptane	500 ppm	400 ppm	Not Available
Carbon dioxide	N/AV	5000 ppm	Not Available
Naphthenic Petroleum Distillate	5 mg/m3	5 mg/m3	Not Available
Naphthenic Petroluem Oil	5 mg/m3	5 mg/m3	Not Available

**Engineering Controls:**

See above Section for applicable exposure limits. Maintain adequate ventilation.

Avoid breathing vapors. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use approved air line type respirator or hood. A self-contained breathing apparatus is required for vapor concentrations above TLV limits.

**Personal Protective Equipment:**

For prolonged exposure wear protective safety glasses, gloves, and apron.

**IX. Physical and Chemical Properties:****Boiling Point:** N/D**Boiling Range:** Not Available**Solubility In Water:** Partial solubility**Flash Point:** < 0°F**Odor Threshold:** Not Available**Vapor Density (AIR = 1):** N/D.**pH Range:** Not Available**Decomposition Temp:** Not Available**Lower Explosive Limit:** N/D**Specific Gravity (H2O = 1):** 0.70**Other Information:** % VOC: 93%**Melting Point:** N/A**Freezing Point:** Not Available**Evaporation Rate (Butyl Acetate = 1):** N/D**Flash Point Method:** Calculated**Appearance and Odor:** Clear liquid with solvent/ether odor.**Vapor Pressure (mm Hg.):** N/D**Partition Coefficient:** Not Available**Auto-Ignition Temp:** Not Available**Upper Explosive Limit:** N/D**X. Stability and Reactivity:****Stability:**

Product is stable

**Conditions to Avoid:**

Avoid heat, sparks, and flames. Avoid incompatible materials.

**Incompatible Materials:**

Avoid contact with oxidizing agents.

**Hazardous Decomposition Products:**

Carbon Dioxide, Carbon Monoxide.

**Possibility of Hazardous Reactions:**

Will not occur.

**XI. Toxicological Information:**

N/D

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### XII. Ecological Information:

N/D

### XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

### XIV. Transport Information:

**Shipping Name:** Not Available

**DOT Hazard Class:** Not Available

**UN/NA#:** Not Available

**DOT Subsidiary Hazard Class:** Not Available

**Packing Group:** Not Available

#### Transportation Information:

DOT Hazard Class: ORM-D

Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)

Shipping Name: Aerosols, flammable, n.o.s (diethyl ether)

Class: 2.1

UN number: UN1950

International:

ICAO/IATA

UN number: UN1950

Shipping Name: Aerosols, flammable, n.o.s. (diethyl ether)

Class: 2.1

IMDG

UN number: UN1950

Shipping Name: Aerosols

Class: 2.1

EmS: F-D, S-U

### XV. Regulatory Information:

SARA 313 Reportable Chemicals

None

USA TSCA: All components of this material are either exempt or listed on the US TSCA Inventory.

State RTK Chemicals:

Heptane - 142-82-5

Diethyl Ether - 60-20-7

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**XVI. Other Information:**

**Chemical State:**     Liquid     Gas     Solid

**Chemical Type:**     Pure     Mixture

**Hazard Category:**

Acute             Chronic             Fire

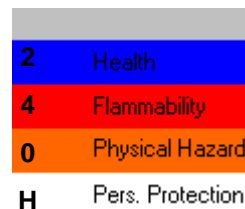
Pressure         Reactive



**Additional Manufacturer Warnings:**

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established  
 N/D: Not Determined  
 N/A: Not Applicable  
 N/AV: Not Available



**Additional Product Information:**

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.