

# SAFETY DATA SHEET

Identification	
Product name:	LEAD/ LEAD1/ LEAD05
Description:	Lead Substitute
Additional identification	
Chemical name:	Mixture
Recommended use and restriction on use	
Recommended use:	Not determined.
Restrictions on use:	Not determined.

## Details of the supplier of the safety data sheet

### Supplier

#### Supplier Details

Manufacturer Name	The Berkebile Oil Company
Address	1216 Red Brant Road Somerset, PA 15501, PO BOX 715
Phone	814-443-1656
Email	info@berkebileoil.com
Fax	814-443-2873
Chemtrec Emergency Tel #	800-424-9300

#### Emergency telephone number:

FOR TRANSPORT EMERGENCY CALL CHEMTREC (+1)703 527 3887, OR WITHIN USA 800 424 9300 (LUBRIZOL)

## Hazard Classification

### Physical Hazards

#### Health Hazards

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Carcinogenicity	Category 2
Aspiration Hazard	Category 1

#### Unknown toxicity

Acute toxicity, oral	0.0 %
Acute toxicity, dermal	0.0 %
Acute toxicity, inhalation, vapor	30.4 %

<b>Hazard Statement:</b>	Combustible liquid. Causes skin irritation. Causes serious eye damage. Suspected of causing cancer. May be fatal if swallowed and enters airways.
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Acute toxicity, inhalation, dust or mist  
66.0 %

**Label Elements:**

**Hazard Symbol:**

<b>Signal Word:</b>	Danger
<b>Prevention:</b>	Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid release to the environment.
<b>Response:</b>	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Specific treatment (see this label). Take off contaminated clothing. In case of fire: Use CO <sub>2</sub> , dry chemical or foam for extinction. Water can be used to cool and protect exposed material.
<b>Storage:</b>	Store in well-ventilated place. Keep cool. Store locked up.
<b>Disposal:</b>	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Precautionary Statement:**

<b>Other hazards which do not result in GHS classification:</b>	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.
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**General information:**

Chemical name	CAS number	Percent by Weight
Kerosene	64742-81-0	30 - 40%
Mineral oil	Not determined.	30 - 40%
Hydrocarbyl amine	Confidential	10 - 20%
Potassium carboxylate	Confidential	10 - 20%
Petroleum naphtha	64742-47-8	5 - 10%
Petroleum naphtha	64742-94-5	1 - 5%
++ Naphthalene	91-20-3	0.1 - 0.5%

The mineral oil contained in this material may be described by one or more of the following CAS Nos.: 64742-54-7, 64742-65-0, 64742-55-8, and 64742-56-9.

*++ The listed components are subcomponents of the hazardous ingredients listed above.*

<b>Ingestion:</b>	Do NOT induce vomiting. Aspiration of material due to vomiting can cause chemical pneumonitis which can be fatal. If vomiting occurs naturally, the casualty should lean forward to reduce the risk of aspiration. Rinse mouth. Immediately call a POISON CENTER/doctor/...
<b>Trade secret information:</b>	A specific chemical identity and/or percentage of composition has been withheld as a trade secret.
<b>General information:</b>	IF exposed or concerned: Get medical advice/attention.
<b>Inhalation:</b>	Remove exposed person to fresh air if adverse effects are observed.
<b>Skin Contact:</b>	Take off contaminated clothing and wash before re-use. Wash skin thoroughly with soap and water. If skin irritation occurs, get medical attention. Launder contaminated clothing before reuse.

<b>Eye contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor/...
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#### **Most important symptoms/effects, acute and delayed**

<b>Symptoms:</b>	Symptoms may be delayed.
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#### **Indication of immediate medical attention and special treatment needed**

<b>Treatment:</b>	Treat symptomatically.
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<b>General Fire Hazards:</b>	Move containers from fire area if you can do so without risk.
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#### **Suitable (and unsuitable) extinguishing media**

<b>Suitable extinguishing media:</b>	CO2, Dry chemical or Foam. Water can be used to cool and protect exposed material.
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<b>Unsuitable extinguishing media:</b>	Do not use water jet as an extinguisher, as this will spread the fire.
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<b>Specific hazards arising from the chemical:</b>	Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations. Vapors may travel considerable distance to a source of ignition and flash back. Water may cause splattering. Container may rupture on heating. When heated, hazardous gases may be released including: sulfur dioxide. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. See section 10 for additional information.
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#### **Special protective equipment and precautions for firefighters**

<b>Special fire fighting procedures:</b>	No data available.
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<b>Special protective equipment for fire-fighters:</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
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<b>Personal precautions, protective equipment and emergency procedures:</b>	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. See Section 8 of the SDS for Personal Protective Equipment.
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<b>Methods and material for containment and cleaning up:</b>	Eliminate all ignition sources if safe to do so. Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.
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<b>Environmental Precautions:</b>	Avoid release to the environment. Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.
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## 7. Handling and storage

<b>Precautions for safe handling:</b>	Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not get in eyes. Avoid contact with skin. Observe good industrial hygiene practices. Provide adequate ventilation. Use personal protective equipment as required. Wash hands thoroughly after handling. Launder contaminated clothing before reuse. Avoid environmental contamination.
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<b>Maximum Handling Temperature:</b>	Not determined.
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<b>Conditions for safe storage, including any incompatibilities:</b>	Keep cool. Store in a well-ventilated place. Store away from incompatible materials. See section 10 for incompatible materials. Do not store near potential sources of ignition.
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<b>Maximum Storage Temperature:</b>	Not determined.
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## Control Parameters:

### Occupational Exposure Limits

<b>Appropriate engineering controls:</b>	Adequate ventilation should be provided so that exposure limits are not exceeded.
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### Individual protection measures, such as personal protective equipment

<b>General information:</b>	Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
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<b>Eye/face protection:</b>	Wear tight-fitting goggles or face shield.
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### Skin Protection

<b>Hand Protection:</b>	Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water.
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<b>Other:</b>	Wear apron or protective clothing in case of contact. Do not wear rings, watches or similar apparel that could entrap the material.
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<b>Respiratory Protection:</b>	A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator. Under normal use conditions, respirator is not usually required. Use appropriate respiratory protection if exposure to dust particles, mist or vapors is likely. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.
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<b>Hygiene measures:</b>	Observe good industrial hygiene practices. Do not get in eyes. Avoid contact with skin. Wash contaminated clothing before reuse. When using do not smoke. Wash hands before breaks and immediately after handling the product.
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#### Appearance

<b>Physical state:</b>	liquid
<b>Form:</b>	liquid
<b>Color:</b>	Dark
<b>Odor:</b>	Mild
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Freezing point:</b>	No data available.
<b>Boiling Point:</b>	No data available.
<b>Flash Point:</b>	154 °F (68 °C) (Pensky-Martens Closed Cup)
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.

#### Upper/lower limit on flammability or explosive limits

<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	1.65 torr (20 °C 68 °F)
<b>Vapor density:</b>	No data available.

**Relative density:** 0.857 - 0.897 60.1 °F (15.6 °C)

#### Solubility(ies)

<b>Solubility in water:</b>	Insoluble in water
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	8.8 mm <sup>2</sup> /s ( 104 °F (40 °C) ) 3 mm <sup>2</sup> /s (100 °C (212 °F) )

#### Other information

<b>Pour Point Temperature:</b>	< -40 °F (-40 °C)
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<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of Hazardous Reactions:</b>	Will not occur.
<b>Conditions to Avoid:</b>	Heat, sparks, flames.
<b>Incompatible Materials:</b>	Strong oxidizing agents.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, and other products of incomplete combustion.

#### Information on likely routes of exposure

<b>Inhalation:</b>	No data available.
<b>Ingestion:</b>	No data available.

<b>Skin Contact:</b>	Causes skin irritation.
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<b>Eye contact:</b>	Causes serious eye damage.
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#### **Information on toxicological effects**

##### **Acute toxicity**

Oral

Dermal

Inhalation

##### **Skin Corrosion/Irritation:**

##### **Serious Eye Damage/Eye Irritation:**

##### **Respiratory sensitization:**

No data available

##### **Skin sensitization:**

Mineral oil	Classification: Not a skin sensitizer. (Read across) Not a skin sensitizer.
Potassium carboxylate	Classification: Not a skin sensitizer. (Read across) Not a skin sensitizer.
Petroleum naphtha	Classification: Not a skin sensitizer. (Literature)

##### **Specific Target Organ Toxicity - Single Exposure:**

Mineral oil	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.
Potassium carboxylate	May cause irritation to the mucous membranes and upper respiratory tract.
Petroleum naphtha	If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

##### **Aspiration Hazard:**

##### **Other effects:**

Petroleum naphtha	Narcotic effect.
Petroleum naphtha	Narcotic effect.
++ Naphthalene	Blood

**Chronic Effects**  
**Carcinogenicity:**

Kerosene	Lifetime skin painting studies with products similar to kerosene have produced skin tumors or skin cancer in laboratory mice.
++ Naphthalene	A two-year National Toxicology Program (NTP) study found an increased incidence of nasal tumors in rats exposed to naphthalene by inhalation. In mice similarly exposed, increased incidences of alveolar/bronchiolar adenomas were observed.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

++ Naphthalene	Overall evaluation: 2B. Possibly carcinogenic to humans.
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**US. National Toxicology Program (NTP) Report on Carcinogens:**

++ Naphthalene	Reasonably Anticipated to be a Human Carcinogen.
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**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ Cell Mutagenicity:**

Kerosene	The American Petroleum Institute tested kerosene in several in vitro and in vivo genotoxicity assays. Although isolated assays gave a positive result there was generally no convincing evidence that kerosene is genotoxic.
++ Naphthalene	Naphthalene has caused mutagenic effects in in vitro studies with metabolic activation, however, in vivo studies do not show evidence of germ cell mutagenicity.

**Reproductive toxicity:**

**Specific Target Organ Toxicity - Repeated Exposure:**

Kerosene	Unknown: Target Organ(s): Central nervous system., bone marrow, Kidney, Liver
Petroleum naphtha	Repeated overexposure to petroleum naphtha can cause nervous system damage.
++ Naphthalene	Repeated overexposure to naphthalene may cause cataracts. Repeated overexposure to naphthalene may cause destruction of red blood cells with anemia, fever, jaundice and kidney and liver damage.

**Ecotoxicity**  
**Fish**

Mineral oil	LC 50 (Fathead Minnow, 4 d): > 100 mg/l
Hydrocarbyl amine	LC 50 (Fathead Minnow, 4 d): 31 mg/l
Potassium carboxylate	LC 50 (Rainbow Trout, 96 h): 27.2 mg/l LC 50 (Zebra Fish, 96 h): 49 mg/l
Petroleum naphtha	LC 50 (Rainbow Trout, 4 Days): 2 mg/l

## Aquatic Invertebrates

Hydrocarbyl amine	EC 50 (Water flea (Daphnia magna), 2 d): > 100 mg/l
Potassium carboxylate	EC 50 (Water flea (Daphnia magna), 48 h): 6.6 mg/l
Petroleum naphtha	EC 50 (Water flea (Daphnia magna), 2 d): 3 mg/l

## Toxicity to Aquatic Plants

Hydrocarbyl amine	EC 50 (Green algae (Selenastrum capricornutum), 4 d): > 450 mg/l
Petroleum naphtha	EC 50 (Green algae (Selenastrum capricornutum), 4 d): 1.1 mg/l

## Toxicity to soil dwelling organisms

No data available

## Sediment Toxicity

No data available

## Toxicity to Terrestrial Plants

No data available

## Toxicity to Above-Ground Organisms

No data available

## Toxicity to microorganisms

Potassium carboxylate	EC 50 (Pseudomonas putida, 0.1 h): 164 mg/l
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## Persistence and Degradability Biodegradation

Mineral oil	OECD TG 301 B, 31 %, 28 d, Not readily degradable.
Hydrocarbyl amine	Inherent Sludge, 20.7 %, 28 d, Not readily degradable.
Potassium carboxylate	OECD TG 301 D, 66.7 %, 28 d, Readily biodegradable Miscellaneous, 91.2 %, 28 d, Readily biodegradable
Petroleum naphtha	OECD TG 301 F, 58 %, 28 d, Not readily degradable.

## Bioaccumulative Potential Bioconcentration Factor (BCF)

No data available

## Partition Coefficient n-octanol / water (log Kow)

## Mobility:

No data available

<b>Other Adverse Effects:</b>	No data available.
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<b>Disposal instructions:</b>	Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product.
<b>Contaminated Packaging:</b>	Container packaging may exhibit hazards.

## DOT

### IMDG

Not regulated.

### IATA

Not regulated.

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

None known.

Shipping descriptions may vary based on mode of transport, quantities ,temperature of the material, package size, and/or origin and destination It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. Review classification requirements before shipping materials at elevated temperatures.

## US Federal Regulations

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Hazard categories

Fire Hazard	Immediate (Acute) Health Hazards	Delayed (Chronic) Health Hazard
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### SARA 302 Extremely Hazardous Substance

### SARA 304 Emergency Release Notification

### SARA 311/312 Hazardous Chemical

### SARA 313 (TRI Reporting)

This product may contain chemical(s) regulated under the Superfund Amendments and Reauthorization Act (SARA).

## US State Regulations

### US. California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

## **Inventory Status**

### Australia (AICS)

All components are in compliance with chemical notification requirements in Australia.

### Canada (DSL/NDSL)

All components are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List.

### China (IECSC)

All components of this product are listed on the Inventory of Existing Chemical Substances in China.

### European Union (REACH)

To obtain information on the REACH compliance status of this product, please visit Lubrizol.com/REACH, or e-mail us at REACH\_MSDS\_INQUIRIES@Lubrizol.com

### Japan (ENCS)

This product may be imported to Japan only by Lubrizol Japan.

### Korea (ECL)

All components are in compliance in Korea.

### New Zealand (NZIoC)

All components are in compliance with chemical notification requirements in New Zealand.

### Philippines (PICCS)

All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).

### Switzerland (SWISS)

All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.

### Taiwan (TCSCA)

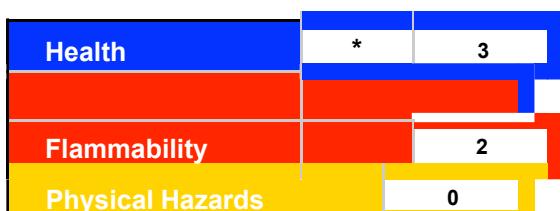
All components of this product are listed on the Taiwan inventory.

### United States (TSCA)

All components of this material are on the US TSCA Inventory.

*The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.*

## **HMIS Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible  
\*Chronic health effect

## **NFPA Hazard ID**

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date:	05/08/2015
Version #:	1.0

<b>Source of information:</b>	Internal company data and other publically available resources.
<b>Further Information:</b>	Contact supplier (see Section 1)
<b>Disclaimer:</b>	<p>As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local regulations remains the responsibility of the user.</p>