MATERIAL SAFETY DATA SHEET

24 Hour Emergency:
INFOTRAC: 1-800-535-5053

NOTE: INFOTRAC emergency number to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

Section 1 - Chemical Product / Company Information

Product Name: LITHOTINE
Identification Number: 41233
Supplier: JELL Chemicals, Inc.
9353 Seymour Ave
Schiller Park, Illinois 60176
(847) 233-0510

Revision Date: 01/26/2011
Supercedes: 07/09/2008

Section 2 - Composition / Information On Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Wt % Less Than</th>
<th>ACGIH TLV- TWA</th>
<th>ACGIH TLV- STEL</th>
<th>OSHA PEL- TWA</th>
<th>OSHA PEL- Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum hydrocarbons</td>
<td>8052-41-3</td>
<td>85.0</td>
<td>100 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,2,4 trimethylbenzene</td>
<td>95-63-6</td>
<td>5.0</td>
<td>25 ppm</td>
<td>25 ppm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>5.0</td>
<td>100 ppm</td>
<td>150 ppm</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>1.0</td>
<td>100 ppm</td>
<td>125 ppm</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>1.0</td>
<td>10 ppm</td>
<td>15 ppm</td>
<td>10 ppm</td>
<td>15 ppm</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

*** EMERGENCY OVERVIEW ***: Combustible liquid and vapor. May be fatal if inhaled. May be fatal if swallowed. Suspect cancer hazard.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Can be absorbed through skin and produce central nervous system effects. Causes skin irritation. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Personnel with pre-existing skin disorders should avoid contact with this product.

Effects Of Overexposure - Inhalation: May be fatal if inhaled. Vapors can reduce the oxygen content in the air. Breathing saturated vapors for a few minutes may be fatal. Saturated vapors can be encountered in confined spaces and/or under conditions of poor ventilation. Can cause pulmonary edema. Vapors can cause irritation of the respiratory tract. High concentrations can cause headache, nausea, weakness, lightheadedness, and stupor (CNS depression). Overexposure to vapors may produce central nervous system depression, causing narcosis.

Effects Of Overexposure - Ingestion: May be fatal if swallowed. Harmful or fatal if liquid is aspirated into lungs. Ingestion may cause gastrointestinal tract irritation. Can be readily absorbed by the stomach and intestinal tract. Symptoms include burning sensation of the mouth and esophagus, nausea, vomiting, diarrhea, dizziness, staggering gait, drowsiness, loss of consciousness and delerium as well as additional central nervous system effects.

Effects Of Overexposure - Chronic Hazards: The International Agency for Research on Cancer has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. This product contains naphthalene. A National Toxicology Program (NTP) draft report states that lifetime inhalation exposure to naphthalene resulted in
increases in tumors of the nose in rats. In a previous NTP study, lifetime inhalation exposure to naphthalene increased lung tumors in female mice. The relevance of the rodent findings to humans is questionable. Suspect cancer hazard. Possible brain damage from overexposure. Overexposure may cause nervous system damage. May cause liver disorder (e.g., edema, proteinuria) and damage. May cause delayed lung damage. Overexposure may cause kidney damage. Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction. Significant exposure to this chemical may adversely affect people with chronic disease of the respiratory system, central nervous system, kidney, liver, skin, and/or eyes.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with water. Flush eyes with water for a minimum of 15 minutes, occasionally lifting and lowering upper lids. Get medical attention promptly. Remove contact lenses if worn.

First Aid - Skin Contact: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately and clean shoes before reuse.

First Aid - Inhalation: Rescuers should put on appropriate protective gear. Remove from area of exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep victim warm. Get immediate medical attention. To prevent aspiration, keep head below knees.

First Aid - Ingestion: Small amounts which accidentally enter mouth should be rinsed out until taste of it is gone. Do not induce vomiting. Do not give liquids. Obtain emergency medical attention.

Section 5 - Fire Fighting Measures

Flash Point, F: 105 (TCC) Lower Explosive Limit, %: N.D.
Upper Explosive Limit, %: N.D.

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Combustible liquid and vapor. Vapors can travel to a source of ignition and flash back. Vapors/dust may cause flash fire or explosion. Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Also, do not reuse container without commercial cleaning or reconditioning. Closed container may explode under extreme heat.

Special Firefighting Procedures: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Avoid use of solid water streams. Use water with caution. Material will float and may ignite on surface of water. Water may be ineffective in fighting the fire. Water spray to cool containers or protect personnel. Use with caution. Water spray and foam must be applied carefully to avoid frothing. Water runoff can cause environmental damage. Dike and collect water used to fight fire.

Section 6 – Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear appropriate personal protective equipment. (See Exposure Controls / Personal Protection Section.) Eliminate all ignition sources. Prevent additional discharge of material if able to do so safely. Do not touch or walk through spilled material. Avoid runoff into storm sewers and ditches which lead to waterways. Ventilate spill area. Stay upwind of spill. If leak or spill has not ignited, use water spray to disperse the vapors. Collect spilled materials for disposal. Use only non-combustible material for clean-up. Use clean, non-sparking tools to collect absorbed materials. Remove from surface by skimming or with suitable absorbents. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

Section 7 - Handling And Storage

Handling: Use only in a well ventilated area. Avoid breathing vapor, fumes or mist. Avoid contact with eyes, skin, and
clothing. Material accumulates static charge (ignition source). When transferring, follow proper grounding procedures. Use spark-resistant tools. Do not load into compartments adjacent to heated cargo. Use explosion proof equipment. Always open containers slowly to allow any excess pressure to vent. Follow all MSDS/label precautions even after containers are emptied because they may retain product residues.

Storage: Keep away from heat, sparks, and flame. Containers can build up pressure if exposed to heat (fire). Store containers in a cool, well ventilated place. Keep container closed when not in use. Protect from direct sunlight. Material is a static accumulator which has the potential of forming ignitable vapor-air mixtures in storage tanks.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Use explosion-proof ventilation equipment.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Skin Protection: Wear impervious gloves to prevent contact with the skin. Wear long sleeves when contact is likely to occur. Wear protective gear as needed - apron, suit, boots.

Eye Protection: Wear safety glasses with side shields (or goggles) and a face shield.

Other protective equipment: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Hygienic Practices: Do not eat, drink, or smoke in areas where this material is used. Avoid breathing vapors. Remove contaminated clothing and wash before reuse. Wash thoroughly after handling. Wash hands before eating.

Section 9 - Physical And Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Range</td>
<td>N.D. - N.D.</td>
</tr>
<tr>
<td>Odor</td>
<td>Pine</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Solubility in H2O</td>
<td>Negligible</td>
</tr>
<tr>
<td>Freeze Point</td>
<td>N.D.</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N.D.</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>&gt;1 (air=1)</td>
</tr>
<tr>
<td>pH</td>
<td>N.D.</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>&lt;1 (n-butyl acetate=1)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>N.D.</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.8106</td>
</tr>
</tbody>
</table>

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid impact, friction, heat, sparks, flame and source of ignition.

Incompatibility: Prevent contact with strong oxidizing agents. Keep separate from alkalies. Keep away from acids.

Hazardous Decomposition: Toxic gases/fumes are given off during burning or thermal decomposition. During combustion carbon monoxide may be formed. During combustion carbon dioxide may be formed.

Hazardous Polymerization: N.D.

Stability: N.D.

Section 11 - Toxicological Information

Product LD50:  
Product LC50:
### Section 12 - Ecological Information

Ecological Information: N.D.

### Section 13 - Disposal Information

Disposal Information: Dispose of waste in accordance with all local, state and federal regulations.

For assistance with your waste management needs, contact JELL Chemicals at 210-275-4541

### Section 14 - Transportation Information

DOT Proper Shipping Name: **Combustible liquid, n.o.s. (petroleum distillates) - Combustible Liquid**

<table>
<thead>
<tr>
<th>Packing Group</th>
<th>DOT Hazard Class</th>
<th>DOT UN/NA Number</th>
<th>Hazard Subclass</th>
<th>ERG #</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>NA1993</td>
<td>128</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The listed Transportation Information applies only to ground transport and does not address regulatory variations due to changes in package size, mode of shipment, or other regulatory descriptors.

### Section 15 - Regulatory Information

#### CERCLA – SARA Hazard Category

This product has been reviewed according to the EPA ‘Hazard Categories’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

#### SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,4 trimethylbenzene</td>
<td>95-63-6</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
</tr>
</tbody>
</table>

#### Toxic Substances Control Act:

All components of this product are listed or are exempt from listing on the TSCA 8(b) inventory. If identified components of
this product are listed under the TSCA 12(b) export notification rule, they will be listed below:

**Chemical Name** | **CAS Number**
--- | ---
Naphthalene | 91-20-3

**U.S. State Regulations: As follows –**

**New Jersey Right-to-Know:**

The following materials are non-hazardous, but are among the top five components in this product.

**Chemical Name** | **CAS Number**
--- | ---
Alpha terpineol | 98-55-5
Rosin Ester | 8050-31-5

**Pennsylvania Right-to-Know:**

The following non-hazardous ingredients are present in the product at greater than 3%.

**Chemical Name** | **CAS Number**
--- | ---
Alpha terpineol | 98-55-5

**California Proposition 65:**

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

**Chemical Name** | **CAS Number**
--- | ---
Ethylbenzene | 100-41-4
Naphthalene | 91-20-3

Warning: The following ingredients present in the product are known to the state of California to cause birth defects or other reproductive hazards.

**International Regulations:**

**CANADIAN WHMIS:**

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

**Section 16 - Other Information**

**HMIS Ratings:**

Health: 1  Flammability: 2  Reactivity: 0  Personal Protection: X

**VOLATILE ORGANIC COMPOUNDS, g/L:** 715

**REASON FOR REVISION:**

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information on this MSDS was obtained from sources which we believe to be reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For these reasons, we do not assume responsibility and expressly disclaim any liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this MSDS may not be applicable. It is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.