1. Identification

Product Name: Kensol K-1
Product Code: 4112
Recommended Use: Kerosene for heaters
Company: American Refining Group, Inc.
77 North Kendall Avenue
Bradford, PA 16701
www.amref.com
msds@amref.com

Emergency Telephone Number(s)
Chemtrec 1-800-424-9300 (24 HRS)
ARG: 814-368-1297 (24 HRS)

2. Hazards Identification

GHS Classification
- Flammable Liquids Category 3
- Aspiration Hazard Category 1
- Eye Irritation Category 2B
- Skin Irritation Category 2
- Specific Target Organ Toxicity-Single Exposure (narcotic effects) – Category 3
- Static Accumulating Liquid

Signal Word: DANGER!
Hazard Statements
- Flammable liquid and vapor
- May be fatal if swallowed and enters airways.
- Causes eye irritation
- Causes skin Irritation
- May cause respiratory irritation; or May cause drowsiness or dizziness

Other Hazard Information
- Static accumulating liquid can become electrostatically charged even in bonded and grounded equipment
- Sparks may ignite liquid and vapor may cause flash fire.
- Liquid conductivity is <100 pS/m (picosiemans/meter) at 77°F

GHS Pictogram

Precautionary Statements
- Do not breathe mist or vapors
- Use only outdoors or in a well-ventilated area
- If inhaled: Remove person to fresh air and keep comfortable for breathing.
- Call a poison center/doctor if you feel unwell.
2. Hazards Identification

If swallowed: immediately call a poison center or doctor.
Do NOT induce vomiting.
Store Locked up
Store in a well-ventilated place.
Wear protective gloves/clothing/eye protection/face protection
Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed
Ground/bond container and receiving equipment. This alone may be insufficient to remove static electricity.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools
If on skin: take of immediately all contaminated clothing. Rinse skin with water/shower.
Store in a well-ventilated place. Keep cool.
Wash thoroughly after handling.
If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: get medical attention/advice.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Dispose of contents in accordance with local/regional/national/international regulations

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Component</th>
<th>Common Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>8052-41-3</td>
<td>Stoddard solvent</td>
<td>Mineral Spirits</td>
<td>40-50%</td>
</tr>
<tr>
<td>64742-47-8</td>
<td>Petroleum Distillates, Hydrotreated Light</td>
<td>Hydrotreated Finished Oil</td>
<td>40-50%</td>
</tr>
</tbody>
</table>

Hazardous Constituents contained in complex substances

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Component</th>
<th>Common Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>111-84-2</td>
<td>Nonane</td>
<td>Nonane</td>
<td>0.5-4.0</td>
</tr>
<tr>
<td>25551-13-7</td>
<td>Trimethyl Benzene (mixed Isomers)</td>
<td>Hemellitene, Pseudocumene, mesitylene</td>
<td>0.25-2.5</td>
</tr>
</tbody>
</table>

4. First Aid Measures

Eyes
Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation
Move exposed person to fresh air.
4. First Aid Measures

**Ingestion**
DO NOT INDUCE VOMITING. If conscious, rinse out mouth with water.

**Symptoms (Acute and delayed)**
Exposure to high concentrations of vapors may cause irritation to the eyes, nose and throat, nausea, and dizziness.

**Note to Physicians**
No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire Fighting Measures

**Suitable Extinguishing Media**
Use dry chemical, CO₂, water spray (FOG) or foam

**Unsuitable Extinguishing Media**
Avoid solid water stream as it may scatter and spread fire.

**Specific Hazards Arising from Chemical**
Elevated temperatures can lead to the formation of irritating vapors. Decomposing products may include the following materials: Carbon dioxide and Carbon monoxide.

This product is a static accumulating liquid. Static accumulating liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor may cause flash fire. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Restrict flow velocity to avoid build-up of static charge. Refer to NFPA 77, API 2003, and CENELEC CLC/TR 50404 for further guidance.

**Protective Equipment and Precautions for Firefighters**
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

**Personal Precautions**
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**Environmental Precautions**
Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

**Methods for Containment**
Stop leak if without risk. Use absorbent pads or earthen dams to contain.

**Methods for Cleanup**
A vapor suppressing foam may be used to reduce vapors. Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled container

7. Handling and Storage

**Handling Procedures**
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. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Use non-sparking tools.
Handling and Storage

Shipping and Storing Procedures
Store in accordance with local regulations. Store in a segregated and approved area. Keep in the original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. Do not store in unlabeled containers. Store and use away from heat, sparks, open flame or any other ignition source. 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 that retain product residue may be hazardous. Incompatibilities:

8. Exposure Controls / Personal Protection

Component Exposure Limits

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV:</th>
<th>OSHA PEL:</th>
<th>NIOSH REL:</th>
<th>NIOSH Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stoddard Solvent</td>
<td>TWA: 100 ppm</td>
<td>TWA: 2900 mg/m³</td>
<td>STEL: N/A ppm</td>
<td>STEL: N/A mg/m³</td>
</tr>
<tr>
<td>Nonane</td>
<td>TWA: 200 ppm</td>
<td>TWA: 350 mg/m³</td>
<td>STEL: N/A ppm</td>
<td>STEL: N/A mg/m³</td>
</tr>
<tr>
<td>Trimethyl Benzene (all isomers)</td>
<td>TWA: 25 ppm</td>
<td>TWA: N/A mg/m³</td>
<td>STEL: N/A ppm</td>
<td>STEL: N/A mg/m³</td>
</tr>
</tbody>
</table>

N/A signifies not available

Engineering Controls
This product is a static accumulating liquid. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Material should be handled in enclosed vessels and equipment. Use only in 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.

Eye/Face Protection
Chemical goggles and face shield.

Skin Protection
Chemical resistant, impervious gloves complying with an approved standard should be worn at all times. Coveralls, apron, and boots as necessary to minimize contact.

Respiratory Protection
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicated this is necessary. Respirator selection must be based on known or anticipated exposure levels.

General Hygiene
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.

9. Physical and Chemical Properties
9. Physical and Chemical Properties

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Please see the Product Specification Sheet for further information.

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Colorless</th>
<th>Flammability</th>
<th>Not Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td>Upper/Lower Flammability Limits</td>
<td>Not Available</td>
</tr>
<tr>
<td>Odor</td>
<td>Petroleum Solvent</td>
<td>Vapor Pressure (mm Hg at 20°C)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not Available</td>
<td>Vapor Density</td>
<td>Not Available</td>
</tr>
<tr>
<td>pH</td>
<td>Not Available</td>
<td>Relative Density (lbs/gal)</td>
<td>6.56</td>
</tr>
<tr>
<td>Melting/Freezing Point (°F)</td>
<td>Not Available</td>
<td>Water Soluble</td>
<td>No</td>
</tr>
<tr>
<td>Initial Boiling Point (°F)</td>
<td>&gt;300</td>
<td>Partition Coefficient: n-octanol/water</td>
<td>Not Available</td>
</tr>
<tr>
<td>Boiling Range (°F)</td>
<td>300-572</td>
<td>Auto-ignition Temperature (°F)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flash Point (°F)</td>
<td>100.4</td>
<td>Decomposition Temperature (°F)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not Available</td>
<td>Viscosity (40°C mm²/s)</td>
<td>1.5</td>
</tr>
</tbody>
</table>

10. Chemical Stability & Reactivity Information

Reactivity
Polymerization will not occur

Chemical Stability
Stable under normal conditions. If heated, product’s static accumulation will rise and could cause flash fire.

Hazardous Reactions
None, under normal processing.

Conditions to Avoid
High temperatures, flames, sparks

Incompatibility
Strong acids and oxidizing materials

Hazardous Decomposition Products
Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

11. Toxicological Information

Acute Exposure

Respiratory Irritation
An inhalation hazard may only arise if product is used in aerosol conditions or if heated up. If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and upper respiratory tract.

Eye Irritation
Causes mild eye irritation that is reversible with proper care.

Skin Irritation
Causes mild skin irritation that is reversible with proper care.

Sensitization
Not expected to cause skin or respiratory sensitization.

Aspiration Hazard
If swallowed can be aspirated into lungs and cause chemical pneumonia, varying degrees of pulmonary injury or death. If swallowed, do NOT induce vomiting.

Chronic Exposure

Target Organ Effects
Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia,
drowsiness, unconsciousness and other central nervous system effects including death.
Prolonged or repeated direct exposure to the skin results in symptoms of irritation and redness, dermatitis or oil acne.

**Carcinogenicity**
No data available to indicate product or any components present at greater than .1% are carcinogenic.

**Mutagenicity**
No data available to indicate product or any components present at greater than .1% are mutagenic or genotoxic.

**Reproductive Toxicity**
No data available to indicate either product or components present at greater than .1% that may cause reproductive toxicity.

**Teratogenicity**
No data available to indicate product or any components contained at greater than .1% may cause birth defects.

**Analysis – LD50 / LC50**

| Ingestion LC50 Rat | >5 mg/L (4Hr mist) |
| Oral LD50 Rat | >5000 mg/kg |
| Dermal LD50 Rabbit | >2000 mg/kg |

### 12. Ecological Information

**Component Analysis- Ecotoxicity – Aquatic Life**

<table>
<thead>
<tr>
<th>Duration/Test/Species</th>
<th>Concentration/Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 hr LL50</td>
<td>8.2 mg/L</td>
</tr>
<tr>
<td><em>Oncorhyncus mykiss</em> 48 hr EL50</td>
<td>32 mg/L</td>
</tr>
<tr>
<td><em>Oncorhyncus mykiss</em> 96 hr EL50</td>
<td>45 mg/L</td>
</tr>
<tr>
<td><em>Scenedesmus subspicatus</em></td>
<td></td>
</tr>
<tr>
<td>Chronic Survival NOELR Aquatic Vertebrates</td>
<td>2.6 mg/L</td>
</tr>
<tr>
<td>Chronic Growth NOELR Aquatic Vertebrates</td>
<td>2.6 mg/L</td>
</tr>
<tr>
<td>Chronic Survival NOELR <em>Daphnia magna</em></td>
<td>16 mg/L</td>
</tr>
<tr>
<td>Chronic Reproduction EL 50 <em>Daphnia magna</em></td>
<td>10 mg/L</td>
</tr>
<tr>
<td>Chronic reproduction NOELR <em>Daphnia magna</em></td>
<td>2.6 mg/L</td>
</tr>
</tbody>
</table>

**Persistence & Degradability**
Inherently biodegradable

**Bioaccumulation Potential**
Not Available

**Soil Mobility**
Not Available

**Other Adverse Effects**
Not Available

### 13. Disposal Considerations

**Disposal Instructions**
The generation of waste should be avoided or minimized wherever possible. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.
### 14. Transportation Information

<table>
<thead>
<tr>
<th>Emergency Response Guide No.</th>
<th>128</th>
<th>UN Number</th>
<th>1223</th>
<th>Shipping Name (technical name)</th>
<th>Kerosene</th>
<th>Hazard Class</th>
<th>Combustible Liquid</th>
<th>Packing Group</th>
<th>III</th>
<th>Labels/Placard</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. DOT Bulk (over 119 gallons)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. DOT Non-Bulk Not Regulated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Exempt from labeling and placarding unless shipped via air or vessel</td>
</tr>
</tbody>
</table>

### 15. Regulatory Information

**SARA Extremely Hazardous Substances (Sections 302 & 304)**

This product does not contain greater than 1% of any “extremely hazardous substances” listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

**SARA Section 313**

This product contains the following components in concentrations greater than 0.1% for carcinogenic substances and/or 1.0% of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

1,2,4 Trimethylbenzene (CASRN: 95-63-6): 2.7%

**SARA Section 311 & 312 Classifications**

| Acute Hazard | Yes |
| Chronic Hazard | Yes |
| Fire Hazard | Yes |
| Reactivity Hazard | No |

**CERCLA**

This product contains the following components listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4:

NONE

**California Prop 65**

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

**Global Chemical Inventories**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>US TSCA</td>
<td>Present*</td>
</tr>
<tr>
<td>EU</td>
<td>Present</td>
</tr>
<tr>
<td>Japan</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Australia | Present
---|---
New Zealand | Present
Canada | Present
Switzerland | Not available
Korea | Present
Philippines | Present
China | Present
Taiwan | Not available

* May be subject to TSCA 12b export notification. Contains Nonane (CASRN: 111-84-2) at 7%.

# 16. Other Information

## US NFPA Ratings

<table>
<thead>
<tr>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

## HMIS Ratings

<table>
<thead>
<tr>
<th>Health</th>
<th>Fire</th>
<th>Physical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

**Revision Date** 27 May 2015  
**Revision Reason** New SDS

*The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.*

End of SDS