1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Klean Strip Denatured Alcohol
Company Name: W. M. Barr
   2105 Channel Avenue
   Memphis, TN 38113
Web site address: www.wmbarr.com

Intended Use: Cleans glass and is used as a fuel for marine stoves

Additional Information
   This product is regulated by the United States Consumer Product Safety Commission
   and is subject to certain labeling requirements under the Federal Hazardous Substances
   Act. These requirements differ from the classification criteria and hazard information
   required for safety data sheets (SDS). The product label also includes other important
   information, including directions for use, and should always be read in its entirety prior to
   using the product.

2. HAZARDS IDENTIFICATION

Flammable Liquids, Category 2
Acute Toxicity: Oral, Category 3
Acute Toxicity: Skin, Category 3
Acute Toxicity: Inhalation, Category 3
Specific Target Organ Toxicity (single exposure), Category 1

GHS Signal Word: Danger
GHS Hazard Phrases:
   H225: Highly flammable liquid and vapor.
   H301: Toxic if swallowed.
   H311: Toxic in contact with skin.
   H331: Toxic if inhaled.
   H370: Causes damage to organs.
GHS Precaution Phrases:
   P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
   P233: Keep container tightly closed.
   P240: Ground/bond container and receiving equipment.
   P241: Use explosion-proof electrical/ventilating/lighting equipment.
   P242: Use only non-sparking tools.
   P243: Take precautionary measures against static discharge.
   P260: Do not breathe gas/mist/vapors/spray.
   P264: Wash hands thoroughly after handling.
   P270: Do not eat, drink or smoke when using this product.
   P271: Use only outdoors or in a well-ventilated area.
   P280: Wear protective gloves/protective clothing/eye protection/face protection.
   P235: Keep cool.
GHS Response Phrases:
   P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
   P302+352: IF ON SKIN: Wash with plenty of soap and water.
   P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated
   clothing. Rinse skin with water/shower.
   P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position
   comfortable for breathing.
Klean Strip Denatured Alcohol

SAFETY DATA SHEET

09/10/2014
Supersedes Revision:

GHS Storage and Disposal

Phrases:
P307+311: IF exposed: Call a POISON CENTER or doctor/physician.
P311: Call a POISON CENTER or doctor/physician.
P330: Rinse mouth.
P361: Remove/Take off immediately all contaminated clothing.
P363: Wash contaminated clothing before reuse.
P370+378: In case of fire, use dry chemical powder to extinguish.
P403+233: Store container tightly closed in well-ventilated place.
P405: Store locked up.
P501: Dispose of contents/container to local, state and federal regulations.

Hazard Rating System:

Health Rating: 2
Flammability Rating: 3
Physical Rating: 0
PPE: X

OSHA Regulatory Status:
This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic):

Inhalation Acute Exposure Effects:
Vapor harmful. May cause dizziness, headache, watering of eyes, irritation of respiratory tract, irritation to the eyes, drowsiness, nausea, other central nervous system effects, spotted or blurry vision, dilation of pupils, and convulsions.

Skin Contact Acute Exposure Effects:
May cause irritation, drying of skin, redness, and dermatitis. May cause symptoms listed under inhalation. May be absorbed through damaged skin.

Eye Contact Acute Exposure Effects:
May cause irritation.

Ingestion Acute Exposure Effects:
Poison. Cannot be made non-poisonous. May be fatal or cause blindness. May produce fluid in the lungs and pulmonary edema. May cause dizziness, headache, nausea, drowsiness, loss of coordination, stupor, reddening of face and or neck, liver, kidney and heart damage, coma, and death. May produce symptoms listed under inhalation.

Chronic Exposure Effects:
May cause symptoms listed under inhalation, dizziness, fatigue, tremors, permanent central nervous system changes, blindness, pancreatic damage, and death.

Target Organs:
Liver, kidneys, pancreas, heart, lungs, brain, central nervous system, eyes

Medical Conditions Generally Aggravated By Exposure:
Diseases of the liver, skin, lung, kidney, central nervous system, pancreas, and heart; asthma; inflammatory or fibrotic pulmonary disease; any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease, or anemias.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Concentration</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol {Ethanol}</td>
<td>30.0 -50.0 %</td>
<td>KQ6300000</td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol {Methyl alcohol; Carbinol; Wood alcohol}</td>
<td>40.0 -60.0 %</td>
<td>PC1400000</td>
</tr>
</tbody>
</table>

Additional Chemical Information: Specific percentage of composition is being withheld as a trade secret.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

Skin: Immediately begin washing the skin thoroughly with large amounts of water and mild soap, if available, while removing contaminated clothing. Seek medical attention if irritation persists.

Eyes: Immediately begin to flush eyes with water, remove any contact lens. Continue to flush the eyes for at least 15 minutes, then seek immediate medical attention.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Seek immediate medical attention. Call a physician, hospital emergency room, or poison control center immediately. Never give anything by mouth to an unconscious person.

Signs and Symptoms Of Exposure: See Potential Health Affects

Note to Physician:

Poison. This product contains methanol. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Call your local poison control center for further instructions.

5. FIRE FIGHTING MEASURES

Flash Pt: 45.00 F  Method Used: Setaflash Closed Cup (Rapid Setaflash)
Explosive Limits: LEL: No data. UEL: No data.
Autoignition Pt: No data.

Suitable Extinguishing Media: Use carbon dioxide, dry powder, or alcohol resistant foam.

Unsuitable Extinguishing Media: Water may be ineffective. Solid streams of water will likely spread the fire.

Fire Fighting Instructions: Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined area. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

Flammable Properties and Hazards: Vapors are heavier than air. Vapor may travel considerable distance to source of ignition and flash back.
6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled:
Vapors are heavier than air. Vapors may cause flash fire or ignite explosively.

Clean up: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. Use non-sparking tools. Use proper bonding and grounding methods for all equipment and processes. Keep out of waterways and bodies of water. Be cautious of vapors collecting in small enclosed spaces, sewers, low lying areas, confined spaces, etc.

Small spills: Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills: Dike far ahead of spill for later disposal.

Waste Disposal: Dispose in accordance with applicable local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:
Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

Do not use this product near any source of heat or open flame, furnace areas, pilot lights, stoves, etc.

Do not use in small enclosed spaces, such as basements and bathrooms where vapors can accumulate. Vapors can accumulate and explode if ignited.

Do not use this product if the work area is not well ventilated. Use only with adequate ventilation to prevent build up of vapors.

Do not spread this product over large surface areas because fire and health safety risks will increase dramatically.

Use proper bonding and grounding when transferring material. Be aware of static electricity generation when handling material.

Precautions To Be Taken in Storing:
Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near any source of heat or open flame, furnace areas, pilot lights, stoves, etc.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
**SAFETY DATA SHEET**

**Klean Strip Denatured Alcohol**

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Partial Chemical Name</th>
<th>OSHA TWA</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol {Ethanol}</td>
<td>PEL: 1000 ppm</td>
<td>TLV: 1000 ppm</td>
<td>No data.</td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol {Methyl alcohol; Carbinol; Wood alcohol}</td>
<td>PEL: 200 ppm</td>
<td>TLV: 200 ppm</td>
<td>No data.</td>
</tr>
</tbody>
</table>

**PEL:** 200 ppm  
**TLV:** 200 ppm  
**STEL:** 250 ppm

**Respiratory Equipment (Specify Type):**

For use in areas with inadequate ventilation or fresh air, wear a properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors.

For OSHA controlled work places and other regular users - Use only with adequate ventilation under engineered air control systems designed to prevent exceeding the appropriate TLV.

A dust mask does not provide protection against vapors.

**Eye Protection:**

Chemical splash goggles should be worn to prevent eye contact.

**Protective Gloves:**

Wear gloves with as much resistance to the chemical ingredients as possible. Glove materials such as nitrile, natural rubber, and neoprene will provide protection. Glove selection should be based on chemicals being used and conditions of use. Consult your glove supplier for additional information. Gloves contaminated with product should be discarded and not reused.

**Other Protective Clothing:**

Various application methods can dictate the use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure.

**Engineering Controls (Ventilation etc.):**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Use only with adequate ventilation to prevent buildup of vapors. Do not use in areas where vapors can accumulate and concentrate, such as basements, bathrooms or small enclosed areas. Whenever possible, use outdoors in an open air area. If using indoors open all windows and doors and maintain a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea or eye-watering -- STOP -- ventilation is inadequate. Leave area immediately and move to fresh air.

**Work/Hygienic/Maintenance Practices:**

Wash hands thoroughly after use and before eating, drinking, smoking, or using the restroom.

Do not eat, drink, or smoke in the work area.

Discard any clothing or other protective equipment that cannot be decontaminated.

Facilities storing or handling this material should be equipped with an emergency eyewash and safety shower.
**9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical States</td>
<td>[ ] Gas [ X ] Liquid [ ] Solid</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>Water white, alcohol odor</td>
</tr>
<tr>
<td>Melting Point</td>
<td>No data.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>147.00 F</td>
</tr>
<tr>
<td>Autoignition Pt</td>
<td>No data.</td>
</tr>
<tr>
<td>Flash Pt</td>
<td>45.00 F</td>
</tr>
<tr>
<td>Explosive Limits</td>
<td>LEL: No data. UEL: No data.</td>
</tr>
<tr>
<td>Specific Gravity (Water = 1)</td>
<td>0.7934 - 0.8108</td>
</tr>
<tr>
<td>Density</td>
<td>6.646 LB/GL</td>
</tr>
<tr>
<td>Vapor Pressure (vs. Air or mm Hg)</td>
<td>76 MM HG at 68.0 F</td>
</tr>
<tr>
<td>Vapor Density (vs. Air = 1)</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>No data.</td>
</tr>
<tr>
<td>Percent Volatile</td>
<td>100.0 % by weight.</td>
</tr>
<tr>
<td>VOC / Volume</td>
<td>793.0000 G/L</td>
</tr>
</tbody>
</table>

**10. STABILITY AND REACTIVITY**

<table>
<thead>
<tr>
<th>Condition</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Unstable [ ] Stable [ X ]</td>
</tr>
<tr>
<td>Incompatibility - Materials To</td>
<td>Incompatible with strong oxidizing agents, strong acids, reactive metals, halogens, strong inorganic acids, and aldehydes.</td>
</tr>
<tr>
<td>Avoid</td>
<td></td>
</tr>
<tr>
<td>Hazardous Decomposition Or</td>
<td>Decomposition may produce carbon monoxide and carbon dioxide.</td>
</tr>
<tr>
<td>Byproducts</td>
<td></td>
</tr>
<tr>
<td>Possibility of Hazardous Reactions</td>
<td>Will occur [ ] Will not occur [ X ]</td>
</tr>
<tr>
<td>Conditions To Avoid -</td>
<td></td>
</tr>
<tr>
<td>Hazardous Reactions</td>
<td></td>
</tr>
</tbody>
</table>

**11. TOXICOLOGICAL INFORMATION**

<table>
<thead>
<tr>
<th>Information</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicological Information</td>
<td>This product has not been tested as a whole. Refer to section 2 for acute and chronic effects.</td>
</tr>
<tr>
<td>Carcinogenicity/Other Information</td>
<td>IARC 1 - Carcinogenic to Humans</td>
</tr>
<tr>
<td></td>
<td>IARC 2B - Possibly Carcinogenic to Humans</td>
</tr>
<tr>
<td></td>
<td>ACGIH A4 - Not Classifiable as a Human Carcinogen.</td>
</tr>
</tbody>
</table>

IARC has determined that the consumption of alcoholic beverages is casually related to the occurrence of malignant tumors of the oral cavity, pharynx, larynx, esophagus, and liver in humans. The carcinogenic response attributed to drinking alcoholic beverages has not be verified in studies with laboratory animals. Established uses of denatured ethanol and non-beverage use of pure ethanol are not considered to pose any significant cancer hazard.
## Klean Strip Denatured Alcohol

### SAFETY DATA SHEET

#### CAS # | Hazardous Components (Chemical Name) | NTP | IARC | ACGIH | OSHA
---|---|---|---|---|---
64-17-5 | Ethyl alcohol {Ethanol} | n.a. | 1 | A4 | n.a.
67-56-1 | Methanol {Methyl alcohol; Carbinol; Wood alcohol} | n.a. | n.a. | n.a. | n.a.

### 12. ECOLOGICAL INFORMATION

**General Ecological Information:**
This product has not been tested as a whole.

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:**
Dispose in accordance with applicable local, state, and federal regulations.

### 14. TRANSPORT INFORMATION

**LAND TRANSPORT (US DOT):**
- **DOT Proper Shipping Name:** Alcohols, n.o.s. (Ethyl Alcohol, Methanol)
- **DOT Hazard Class:** 3 FLAMMABLE LIQUID
- **UN/NA Number:** UN1987
- **Packing Group:** II

**Additional Transport Information:**
The shipper / supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

### 15. REGULATORY INFORMATION

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

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>S. 302 (EHS)</th>
<th>S. 304 RQ</th>
<th>S. 313 (TRI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol {Ethanol}</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol {Methyl alcohol; Carbinol; Wood alcohol}</td>
<td>No</td>
<td>Yes 5000 LB</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:**
- Acute (immediate) Health Hazard [X] Yes [ ] No
- Chronic (delayed) Health Hazard [X] Yes [ ] No
- Fire Hazard [X] Yes [ ] No
- Sudden Release of Pressure Hazard [ ] Yes [X] No
- Reactive Hazard [ ] Yes [X] No

#### Other US EPA or State Lists

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Other US EPA or State Lists</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol {Ethanol}</td>
<td>CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No</td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methanol {Methyl alcohol; Carbinol; Wood alcohol}</td>
<td>CAA HAP,ODC: HAP; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: Yes</td>
</tr>
</tbody>
</table>
16. OTHER INFORMATION

Revision Date: 04/13/2015
Preparer Name: W.M. Barr EHS Dept (901)775-0100
Additional Information About This Product: No data available.

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.