MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Brake Cleaner  
PRODUCT CODE: PK 7054  
GENERAL USE: Cleaning solvent  
PRODUCT DESCRIPTION: Colorless flammable liquid, characteristic hydrocarbon odor

MANUFACTURER'S NAME  
Power Kleen Corporation  
101 Bayview Blvd  
Oldsmar, FL 34677  
USA

DATE PREPARED: October 31, 2008  
SUPERSSEDES: November 19, 2001

ADDRESS (NUMBER, STREET, P.O. BOX)  
101 Bayview Blvd  
Oldsmar, FL 34677

TELEPHONE NUMBER FOR INFORMATION  
(813) 854-2648

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW  
Colorless flammable liquid, potentially hazardous vapors. Can cause serious or fatal complications if swallowed. Can cause eye and skin irritation upon contact. Inhalation of vapors can cause anesthetic effect leading to death in poorly ventilated areas. Hazard Symbols for this product - F, Xn, N. Risk Phrases - R11, 38, 50/53, 65, 67

POTENTIAL HEALTH EFFECTS

INHALATION: High concentrations are irritating to the respiratory tract; may cause headache, dizziness, nausea, blurred vision, blindness, vomiting and malaise.

SKIN: Brief contact may cause slight irritation; prolonged contact may cause moderate reddening, swelling and possible necrosis.

EYES: Contact causes severe irritation and pain associated with redness and swelling of the conjunctiva.

INGESTION: May result in vomiting; aspiration of vomitus into the lungs must be avoided; DO NOT induce vomiting. Minute amounts aspirated into the lungs can produce severe lung injury, chemical pneumonitis, pulmonary edema or death. Contains methyl alcohol; large doses may result in red blood cell hemolysis. Methyl alcohol is a systemic poison capable of causing blindness.

CARCINOGENICITY  
NTP? No  
IARC MONOGRAPHS? No  
OSHA REGULATED? No

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>HAZARDOUS COMPONENTS</th>
<th>CAS #</th>
<th>EINECS #</th>
<th>% (by weight)</th>
<th>OSHA PEL</th>
<th>ACGIH TWA</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heptane</td>
<td>142-82-5</td>
<td>205-563-8</td>
<td>70 - 80</td>
<td>500</td>
<td>400</td>
<td>1639</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>67-63-0</td>
<td>200-661-7</td>
<td>7 - 13</td>
<td>400</td>
<td>980</td>
<td>400</td>
</tr>
<tr>
<td>Methyl alcohol (a,b,c)</td>
<td>67-56-1</td>
<td>200-669-6</td>
<td>20 - 30</td>
<td>200</td>
<td>260</td>
<td>200</td>
</tr>
</tbody>
</table>

(a,c) See Section 15
(b) Indicates that the Resource Conservation and Recovery Act (RCRA) has determined the waste for this chemical is listed as hazardous and must be handled according to regulations in 40 CFR 260-281.
**SECTION 4 - FIRST AID MEASURES**

**INHALATION:** Remove affected person to fresh air; provide oxygen if breathing is difficult; if affected person is not breathing, administer CPR and seek emergency medical attention.

**SKIN:** Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

**EYES:** Check for and remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention.

**INGESTION:** DO NOT induce vomiting; if vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs; seek immediate medical attention. Vomiting may be induced only under the supervision of a physician.

**SECTION 5 - FIRE FIGHTING MEASURES**

**FLAMMABLE LIMITS**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>LEL</th>
<th>UEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>30° F (1.1° C)</td>
<td>Autoignition Temperature: Not determined</td>
<td>NFPA CLASS: IB</td>
</tr>
</tbody>
</table>

**GENERAL HAZARDS:** Product is flammable. Products of combustion include compounds of carbon, hydrogen and oxygen, including carbon monoxide.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**HAZARDOUS COMBUSTION PRODUCTS**

Smoke, fumes or vapors, oxides of carbon.

**SECTION 7 - HANDLING AND STORAGE**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. CAUTION - FLAMMABLE - keep away from all sources of ignition. "Empty" containers may contain residue which may form explosive vapors. Do not weld or cut near empty container that has not been professionally reconditioned. Use non-sparking tools when opening and closing containers. Maintain well ventilated work areas to minimize exposure when handling this material.

**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS**

The use of local exhaust ventilation is recommended to control emissions near the source. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment.

**PERSONAL PROTECTION**

**RESPIRATORY PROTECTION:** None required while threshold limits are kept below maximum allowable concentrations; if TWA exceeds limits, NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134, ANSI Z88.2, or European Standard EN 149 for complete regulations.

**PROTECTIVE GLOVES:** Neoprene, butyl or nitrile rubber gloves with cuffs.

**EYE PROTECTION:** Chemical splash goggles. Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Safety eyewash station nearby.

**WORK / HYGIENIC PRACTICES:** Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.
**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

- **APPEARANCE AND ODOR**: Clear colorless liquid, characteristic hydrocarbon odor
- **SPECIFIC GRAVITY (WATER = 1)**: 0.687
- **SOLUBILITY IN WATER**: Appreciable
- **pH**: Not applicable
- **BOILING POINT**: 208.4°F (98°C)
- **VISCOSITY**: Like that of water

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAPOR DENSITY (AIR = 1)</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>EVAPORATION RATE (Water = 1)</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>% VOLATILE (BY WEIGHT)</td>
<td>100%</td>
</tr>
<tr>
<td>VAPOR PRESSURE</td>
<td>45 mm Hg @ 20°C</td>
</tr>
<tr>
<td>FREEZING POINT</td>
<td>Not determined</td>
</tr>
<tr>
<td>VOLATILE ORGANIC COMPOUNDS (VOC's)</td>
<td>5.7 pounds / gallon (682 grams / liter)</td>
</tr>
</tbody>
</table>

**SECTION 10 - STABILITY AND REACTIVITY**

- **STABILITY**: STABLE: X
- **UNSTABLE**: X
- **CONDITIONS TO AVOID**: Extreme temperatures, open flames, sparks.
- **INCOMPATIBILITY (MATERIALS TO AVOID)**: Strong oxidizers, strong acids.
- **HAZARDOUS DECOMPOSITION OR BYPRODUCTS**: Decomposition will not occur if handled and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes or vapors, and smoke may be produced.
- **HAZARDOUS POLYMERIZATION**: MAY OCCUR: X
- **WILL NOT OCCUR**: X

**CONDITIONS TO AVOID**: None

**SECTION 11 - TOXICOLOGICAL INFORMATION**

- **Hazardous Ingredients**
  - Heptane: CAS # 142-82-5, EINECS # 205-563-8, LD50 of Ingredient 75 gm / m3 / 2H Inhalation - mouse, LC50 of Ingredient Species and Route Not established
  - Isopropyl alcohol: CAS # 67-63-0, EINECS # 200-661-7, LD50 of Ingredient Oral - rat 5840 mg / kg, LC50 of Ingredient Species and Route Not established
  - Methyl alcohol (a,b,c): CAS # 67-56-1, EINECS # 200-659-6, LD50 of Ingredient Oral - rat 9100 mg / kg, LC50 of Ingredient Species and Route Not established

**SECTION 12 - ECOLOGICAL INFORMATION**

No data are available on the adverse effects of this material on the environment. Neither COD nor BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. None of the ingredients in this mixture are classified as a Marine Pollutant.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Waste Disposal Method: Dispose of in accordance with local, state, and federal regulations. This product may produce hazardous vapors in a closed disposal container creating a dangerous environment. Refer to 40 CFR 260 - 299 for complete waste disposal regulations. Consult your local, state, or federal agency before disposing of any chemicals. Do not flush to sanitary sewer or waterway.

**SECTION 14 - TRANSPORT INFORMATION**

- **PROPER SHIPPING NAME**: Heptane mixture
- **DOT HAZARD CLASS / Pack Group**: 3 / II
- **IATA HAZARD CLASS / Pack Group**: 3 / II
- **REFERENCE**: 49 CFR 173.150, .202, .242
- **IMDG HAZARD CLASS**: 3 / II
- **UN / NA IDENTIFICATION NUMBER**: UN 1206
- **LABEL**: FLAMMABLE LIQUID
- **RID/ADR Dangerous Goods Code**: 3
- **UN TDG Class / Pack Group**: 3 / II
- **HAZARD SYMBOLS**: F
- **UN TDG Class / Pack Group**: 3 / II
- **HAZARD SYMBOLS**: F
- **Hazard Identification Number (HIN)**: 33

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.
**SECTION 15 - REGULATORY INFORMATION**

**TSCA (Toxic Substance Control Act)**
All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.

**SARA TITLE III (Superfund Amendments and Reauthorization Act)**
311/312 Hazard Categories
- Immediate health, fire hazard,
- 313 Reportable Ingredients:
  - (a) Indicates a toxic chemical subject to annual reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

**CERCLA (Comprehensive Response Compensation and Liability Act)**
- (c) The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture > 24,000 lbs) or greater amounts, according to 40 CFR 302.

**California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986**
- There are no reportable chemicals present known to the state of California to cause cancer or reproductive toxicity.

**CPR (Canadian Controlled Products Regulations)**
- This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.  WHMIS Classification: B2, D2B

**IDL (Canadian Ingredient Disclosure List)**
- Components of this product identified by CAS number and listed on the Canadian Ingredient Disclosure List are shown in Section 3.

**DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List)**
- Components of this product identified by CAS number are on the European Inventory of Existing Commercial Chemical Substances.

**EINECS (European Inventory of Existing Commercial Chemical Substances)**
- Components of this product identified by CAS numbers are on the European Inventory of Existing Commercial Chemical Substances.

**GGW Water Quality Index: 1**

**SECTION 16 - OTHER INFORMATION**

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on Information from similar products, the ingredients, technical literature, and/or professional experience.

<table>
<thead>
<tr>
<th>Risk Phrases</th>
<th>SYMBOL(S) REQUIRED FOR LABEL</th>
<th>Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>R11  Highly flammable.</td>
<td><img src="image" alt="Harmful Flammable" /></td>
<td>S9  Keep container in a well-ventilated place.</td>
</tr>
<tr>
<td>R38  Irritating to skin.</td>
<td></td>
<td>S16 Keep away from sources of ignition</td>
</tr>
<tr>
<td>R50/53 Very toxic to aquatic</td>
<td><img src="image" alt="Environmental Hazard" /></td>
<td>S29 Do not empty into drains.</td>
</tr>
<tr>
<td>organisms, may cause long</td>
<td></td>
<td>S33 Take precautionary measures against static discharges.</td>
</tr>
<tr>
<td>term adverse effects in the</td>
<td></td>
<td>S60 This material and its container must be disposed of as hazardous waste.</td>
</tr>
<tr>
<td>aquatic environment.</td>
<td></td>
<td>S61 Avoid release to the environment. Refer to special instructions / safety data sheets.</td>
</tr>
<tr>
<td>R65  Damaging to lungs when</td>
<td></td>
<td>S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this label.</td>
</tr>
<tr>
<td>swallowed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R67  Vapours may cause</td>
<td></td>
<td></td>
</tr>
<tr>
<td>drowsiness and dizziness.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**HMIS HAZARD RATINGS**

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
<th>PERSONAL PROTECTIVE EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (1)</td>
<td>3 (0)</td>
<td>0 (1)</td>
<td>B (Safety Glasses, Gloves)</td>
</tr>
</tbody>
</table>

**REVISION SUMMARY:**
This MSDS has been revised in the following sections:
- Complete format update

**MSDS Prepared by:**

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.