SECTION I: PRODUCT INFORMATION

Product Name: BAR KEEPERS FRIEND CLEANSER & POLISH
Product Use: Cleaning and polishing hard surfaces
SerVaas Laboratories, Inc.
5240 Walt Place
Indianapolis, IN 46254

Shipping Information: Non-Hazardous Products

NFPA Ratings:
- Health: 2-Moderate
- Fire: 0-Minimal
- Reactivity: 0-Minimal

HMIS Ratings:
- Health: 2-Moderate
- Fire: 0-Minimal
- Reactivity: 0-Minimal

Pers. Prot. Equip: See Section VIII

SECTION II: HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS NO.</th>
<th>% WT</th>
<th>Exposure Limits: TLV/PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxalic Acid</td>
<td>144-62-7</td>
<td>5-10</td>
<td>TWA: 2 (mg/m³) from ACGIH (TVL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 1 (mg/m³) from OSHA (PEL)</td>
</tr>
</tbody>
</table>

Toxological Data on Ingredients: Oxalic acid anhydrous: ORAL (LD50): Acute: 7500 mg/kg (rat)

SECTION III: PHYSICAL DATA

- Boiling Point: Unknown
- Vapor Density (AIR=1): Unknown
- Evaporation Rate: N/A
- Physical State: Free-flowing powder
- Appearance & Odor: White, none
- Specific Gravity (H²O=1): 0.85-0.95
- Percent Solid by Weight: 100%
- pH: 1.5-2.5 (3% aqueous slurry)

SECTION IV: FIRE & EXPLOSIVE HAZARD DATA

- Flash Point: N/A
- Flammable Limits: Not established
- Extinguishing Media: Not a fire hazard. Use extinguishing media appropriate for surrounding fire.
- Special Fire-fighting Instructions: Wear NIOSH approved self-contained breathing apparatus and protective clothing appropriate for a chemical fire. Cool fire-exposed containers with water spray.

SECTION V: HEALTH HAZARD DATA

- Threshold Limit Value: Not established
- Primary Routes of Entry: Inhalation, Skin Contact, Eyes, Oral
- Causes eye irritation: Symptoms may include redness, pain, swelling, and tearing.
- Causes skin irritation: Symptoms may include redness, pain, and swelling.
- Harmful if swallowed: Symptoms may include nausea, vomiting, pain and diarrhea. Contains oxalic acid.
- Avoid contact with skin and eyes. Do not swallow. Do not mix with chlorine bleach or any other household chemicals. Avoid breathing dust particles. Wash thoroughly after handling. Keep out of reach of children.

Emergency & First Aid procedures:

- Eyes: Immediately rinse eyes with water. Remove any contact lenses and continue to rinse eyes with plenty of water for at least 15 minutes. If irritation continues or persists, get medical attention.
- Skin: Wash skin thoroughly with soap and water. Get medical attention if irritation persists. Wash contaminated clothing before use.
- Ingestion: DO NOT INDUCE VOMITING. Rinse mouth and give a glass of milk to drink. Consult a poison control center or physician immediately. Never give an unconscious person anything to ingest.
- Inhalation: Move to fresh air. If irritation persists or there is any trouble breathing, get immediate medical attention.
SECTION VI: REACTIVITY DATA

Stability: Stable
Incompatible materials: Chlorine bleach, ammonia, and other alkaline products
Hazardous decomposition products: Oxalic acid may generate formic acid and CO under fire conditions
Hazardous Polymerization: Will not occur

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to be taken in case Material is released or spilled:
- Carefully sweep up small spills, raising a minimum amount of dust, and discard into a household waste container for disposal.
- Contain and collect large spills with minimum amount of dust and retain for evaluation.
Waste Disposal Method: Dispose according to the local, state, or federal regulations. Use baking soda to neutralize acid. Wear protective equipment as needed.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not normally required when good ventilation is provided. If respiratory irritation occurs, the use of a NIOSH approved respirator suitable for the use-conditions and chemicals listed in Section II should be considered
Ventilation: No specific controls are needed.
Protective gloves: Wear rubber gloves if sensitive skin or prolonged use. Emergency responders should wear impermeable gloves.
Eye Protection: Avoid contact with eyes. Emergency responders should wear full eye and face protection.
Work hygienic practices: Washing with soap and water after use is recommended as good hygienic practice to prevent possible skin irritation and/or eye irritation from skin contact.

SECTION IX: SPECIAL PRECAUTIONS

Precautions, handling and storage: Store in original container in an upright position in a cool, dry area inaccessible to children and pets. Keep away from direct sunlight and freezing conditions.

SECTION X: TRANSPORTATION INFORMATION

Not Regulated by DOT.
DOT Transportation Number: Not available
Packing Group: Not Available
Maritime Information: Not available
Hazardous substances report Quantity: Not available
TDG Classification: Consumer Commodity-Transborder Consignment
ADR Classification: Not applicable
IMDG Classification: Corrosive liquid, acid, organic n.o.s (contains oxalic acid) class 8, UN3256-III-LTD QTY
IATA Classification: Does not qualify in manufactured case lot size

SECTION XI: REGULATORY INFORMATION

U.S. Federal and State Regulations: SARA Title III Section 313 Toxic Chemical Notification &Release Reporting: none
Other Classification: Not controlled under WHMIS (Canada)

PREPARATION INFORMATION:

Name: Erin Rissi
Title: V.P. of Research and Development
Effective Date: 11/1/2012
Supersedes: 3/3/2009

BAR KEEPERS FRIEND CLEANSER & POLISH
1. Product and Company Identification

Product Code: LL44
Product Name: KS Xylol Xylene

Manufacturer Information
Company Name: W. M. Barr
2105 Channel Avenue
Memphis, TN 38113
Phone Number: (901)775-0100
Emergency Contact: 3E 24 Hour Emergency Contact (800)451-8346
Information: W.M. Barr Customer Service (800)398-3892
Web site address: www.wmbarr.com
Preparer Name: W.M. Barr EHS Department (901)775-0100

Synonyms
GXY24, QXY24, CXY24

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>OSHA PEL</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Xylene (mixed isomers) (Benzene, dimethyl-)</td>
<td>1330-20-7</td>
<td>60.0 -100.0 %</td>
<td>100 ppm</td>
<td>100 ppm</td>
<td>No data.</td>
</tr>
<tr>
<td>2. Ethylbenzene (Ethylbenzol; Phenylethane)</td>
<td>100-41-4</td>
<td>10.0 -30.0 %</td>
<td>100 ppm</td>
<td>100 ppm</td>
<td>No data.</td>
</tr>
</tbody>
</table>

Hazardous Components (Chemical Name)
1. Xylene (mixed isomers) (Benzene, dimethyl-) 1330-20-7 No data. No data. 150 ppm No data.
2. Ethylbenzene (Ethylbenzol; Phenylethane) 100-41-4 No data. No data. 125 ppm No data.

Additional Chemical Information
Ethylbenzene is a component of Xylene.

3. Hazards Identification

Emergency Overview

Danger! Flammable. Harmful or fatal if swallowed. Vapor harmful.

Keep away from heat, sparks, flame and all other sources of ignition. Vapors may cause flash fire or ignite explosively. Vapors may travel long distances to other areas and rooms away from work site.

Potential Health Effects (Acute and Chronic)

Inhalation Acute Exposure Effects:

Vapor harmful. May cause dizziness, headache, irritation of respiratory tract, weakness, drowsiness, depression of central nervous system, and watering of eyes. Severe overexposure may cause unconsciousness, anesthesia, irregular heartbeat, and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

This product is a skin irritant. It may be absorbed through the skin. It may cause irritation, dermatitis, drying of skin, and numbness in fingers and arms. May increase severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. It may cause irritation, redness, stinging, tearing, excessive swelling of the...
conjunctiva; and or excessive blinking.

Ingestion Acute Exposure Effects:
Harmful or fatal if swallowed. May cause nausea, vomiting, gastrointestinal irritation, or diarrhea.

Chronic Exposure Effects:
Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. May cause skin irritation, permanent central nervous system changes, kidney damage, and liver damage.

**Signs and Symptoms Of Exposure**
See Potential Health Effects.

**Medical Conditions Generally Aggravated By Exposure**
Diseases of the skin, liver, and kidneys.

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

### 4. First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:**
If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

**Skin Contact:**
Irritation may result. Immediately wash with soap and water.

**Eye Contact:**
Immediately flush with water, remove any contact lenses, continue flushing with water for at least 15 minutes, then get medical attention.

**Ingestion:**
Do not induce vomiting. Call your local poison control center, hospital emergency room, or physician immediately for instructions.

**Note to Physician**
Call your local poison control center for further information.

### 5. Fire Fighting Measures

**Flammability Classification:**
NFPA Class IC flammable liquid

**Flash Pt:**
81 F  Method Used:  Closed Cup

**Explosive Limits:**
LEL:  AP 1%  UEL:  AP 7%

**Autoignition Pt:**
430 C

**Fire Fighting Instructions**
Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. 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**
Flammable Liquid! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. If container is
not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products**
Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons, aldehydes and other products of incomplete combustion.

**Extinguishing Media**
Use carbon dioxide, dry powder, or foam.

**Unsuitable Extinguishing Media**
No data available.

### 6. Accidental Release Measures

**Steps To Be Taken In Case Material Is Released Or Spilled**
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. Vapors can accumulate and explode if ignited.

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

**Precautions To Be Taken in Storing**
Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

### 8. Exposure Controls/Personal Protection

**Respiratory Equipment (Specify Type)**
For OSHA controlled work place and other regular users --Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provided protection against vapors.
Eye Protection
Safety glasses, chemical goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

Protective Gloves
Wear gloves with as much resistance to the chemical ingredients as possible. Glove materials such as nitrile rubber may 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, or smoking.

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>Physical States:</th>
<th>[ ] Gas</th>
<th>[X] Liquid</th>
<th>[ ] Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Point:</td>
<td>-48 C - -25 C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>280 F - 290 F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition Pt:</td>
<td>430 C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Pt:</td>
<td>81 F Method Used: Closed Cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Limits:</td>
<td>LEL: AP 1% UEL: AP 7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity (Water = 1):</td>
<td>0.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density:</td>
<td>7.18 LB/GL at 77 F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure (vs. Air or mm Hg):</td>
<td>7 MM HG at 20 C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density (vs. Air = 1):</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate (vs Butyl Acetate=1):</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Percent Volatile: 100 % by weight.
VOC / Volume: 870 G/L
HAP / Volume: 100 % WT

Appearance and Odor
Sweet, pungent aromatic hydrocarbon

10. Stability and Reactivity

Stability: Unstable [ ] Stable [ X ]

Conditions To Avoid - Instability
No data available.

Incompatibility - Materials To Avoid
Incompatible with strong oxidizing agents.

Hazardous Decomposition Or Byproducts
Decomposition may produce carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will occur [ ] Will not occur [ X ]

Conditions To Avoid - Hazardous Polymerization
No data available.

11. Toxicological Information

Xylene, all isomers:
Effects from Acute Exposure:
ORAL (LD50), Acute: 4,300 mg/kg [Rat].
INHALATION (LC50), Acute: 4,550 ppm for four hours [Rat].
DERMAL (LD50), Acute: 14,100 uL/kg [Rabbit].
Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, CNS damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross over-exposure.

Ethylbenzene:
Effects from Acute Exposure:
ORAL (LD50), Acute: 3,500 mg/kg [Rat].
DERMAL (LD50), Acute: 17,800 uL/kg [Rabbit].
INTRAPERITONEAL (LD50), Acute: 2,624 mg/kg [Rat].

Chronic Toxicological Effects
Xylene, all isomers:
Effects from Prolonged or Repeated Exposure:
Impaired neurological function was reported in workers exposed to solvents including xylene. Studies in laboratory animals have shown evidence of impaired hearing following high levels of exposure. Studies in laboratory animals suggest some changes in reproductive organs following high levels of exposure but no significant effects on reproduction were observed. Studies in laboratory animals indicate skeletal and visceral malformations, developmental delays, and increased fetal resorptions following extremely high levels of maternal exposure.

Adverse effects on the liver, kidney, bone marrow (changes in blood cell parameters) were observed in laboratory animals following high levels of exposure. The relevance of these observations to humans is not clear at this time.
Ethyl Benzene:
Effects from Prolonged or Repeated Exposure:
Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). Also, the incidence of tumors was elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as “possibly carcinogenic to humans” (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

Carcinogenicity/Other Information
IARC 2B - Possibly Carcinogenic to Humans
ACGIH A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
ACGIH A4 - Not Classifiable as a Human Carcinogen.

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Xylene (mixed isomers) (Benzene, dimethyl-)</td>
<td>1330-20-7</td>
<td>n.a.</td>
<td>n.a.</td>
<td>A4</td>
<td>n.a.</td>
</tr>
<tr>
<td>2. Ethylbenzene (Ethylbenzol; Phenylethane)</td>
<td>100-41-4</td>
<td>No</td>
<td>2B</td>
<td>A3</td>
<td>No</td>
</tr>
</tbody>
</table>

12. Ecological Information
This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.

Biodegradability: Rapidly biodegradable in aerobic conditions.
Partition Coefficient (log Kow): 2 to 3 (based on similar materials)
Photodegradation: Based on similar materials, this product will have a significant tendency to partition to air. Hydrocarbons from this product which do partition to air are expected to rapidly photodegrade.
Stability in Water: Degradation of this product in water occurs primarily by microbial action.
Distribution: Principally to air.

13. Disposal Considerations
Waste Disposal Method
Dispose in accordance with local, state, and federal regulations.

14. Transport Information
LAND TRANSPORT (US DOT)
DOT Proper Shipping Name: Xylenes
DOT Hazard Class: 3
DOT Hazard Label: FLAMMABLE LIQUID
UN/NA Number: UN1307
Packing Group: III

Additional Transport Information
For D.O.T. information, contact W.M. Barr Technical Services at 1-800-398-3892.

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
15. Regulatory Information

**US EPA SARA Title III**

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene (mixed isomers) (Benzene, dimethyl-)</td>
<td>1330-20-7</td>
<td>No</td>
<td>Yes 100 LB</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ethylbenzene (Ethylbenzol; Phenylethane)</td>
<td>100-41-4</td>
<td>No</td>
<td>Yes 1000 LB</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**US EPA CAA, CWA, TSCA**

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>EPA CAA</th>
<th>EPA CWA NPDES</th>
<th>EPA TSCA</th>
<th>CA PROP 65</th>
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<tbody>
<tr>
<td>Xylene (mixed isomers) (Benzene, dimethyl-)</td>
<td>1330-20-7</td>
<td>HAP, ODC ()</td>
<td>Yes</td>
<td>Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Ethylbenzene (Ethylbenzol; Phenylethane)</td>
<td>100-41-4</td>
<td>HAP, ODC ()</td>
<td>Yes</td>
<td>Inventory, 4 Test</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**EPA Hazard Categories:**

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

- [X] Yes [ ] No Acute (immediate) Health Hazard
- [X] Yes [ ] No Chronic (delayed) Health Hazard
- [X] Yes [ ] No Fire Hazard
- [ ] Yes [X] No Sudden Release of Pressure Hazard
- [ ] Yes [X] No Reactive Hazard

**Company Policy or Disclaimer**

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