MATERIAL SAFETY DATA SHEET

METER ROLLER CLEANER FAST

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: METER ROLLER CLEANER FAST
PRODUCT CODE: MRCF

MANUFACTURER
Tarr, LLC
P.O. Box 12570
Portland OR 97212

24 HR. EMERGENCY TELEPHONE NUMBERS
CHEMTREC (US Transportation): (800) 424 - 9300
CANUTEC (Canadian Transportation): (613) 996 - 6666

SERVICE NUMBER: 503-288-5294

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
PHYSICAL APPEARANCE: Clear, water-white liquid.
IMMEDIATE CONCERNS: DANGER! Flammable liquid and vapor. Harmful or fatal if swallowed.
Vapors are heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Can cause severe lung damage and may be fatal if swallowed. Causes skin irritation. May be harmful if swallowed. May cause CNS depression.

POTENTIAL HEALTH EFFECTS
EYES: Moderately irritating to the eyes. May cause pain, redness, swelling and blurred vision.
SKIN: Liquid is mildly irritating to the skin. May cause a burning sensation, redness and/or swelling.
Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

INGESTION: Liquid is moderately toxic and may be harmful if swallowed. Ingestion of product may result in vomiting; aspiration (breathing) of vomitus into the lungs must be avoided as even small quantities may result in aspir. pneumonitis. Serious lung damage and possibly fatal chemical pneumonia (chemical pneumonitis) can develop if this occurs. May cause central nervous system (CNS) depression resulting in dizziness, light headedness, headache, nausea and loss of coordination. Significant exposure may result in unconsciousness and death. May cause gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting, or diarrhea. May cause abdominal pain and vomiting, sometime bloody. May cause low blood pressure, rapid heart beat and liver damage.

INHALATION: Breathing of high vapor concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death. Vapors expected to be slightly irritating.
Prolonged and repeated exposures to high concentrations may cause hearing loss. Chronic hydrocarbon abuse (for example, sniffing glue or light hydrocarbons such as contained in this material) has been associated with irregular heart rhythms and potential cardiac arrest.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

**ACUTE TOXICITY:** Irritation as noted above. Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness, and nausea; in extreme cases, unconsciousness and death may occur. Aspiration pneumonitis may be evidenced by coughing, labored breathing and cyanosis (bluish skin). Liver damage may be evidenced by loss of appetite, jaundice and sometimes pain in the upper abdomen on the right side.

**CHRONIC EFFECTS:** Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. Impaired function from preexisting disorders may be aggravated by exposure to this product. The following organs and/or organ systems may be damaged by overexposure to the material. Heart, kidney, liver, auditory system. In severe cases death may result.

**CARCINOGENICITY:** Toluene is not known to be mutagenic or carcinogenic. However, the available human and experimental data are limited and insufficient to assess carcinogenic potential. Toluene is not listed as a carcinogen by NTP, IARC, or OSHA. Intentional abuse of toluene vapors has been linked to damage of brain, liver, kidney and to death. Many case studies involving abuse during pregnancy clearly indicate that toluene is a developmental toxicant. Developmental toxic effects comparable to those observed in humans have been seen in lab animals but the effects were generally associated with maternal toxicity.

**MEDICAL CONDITIONS AGGRAVATED:** Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. Impaired function from preexisting disorders may be aggravated by exposure to this product. The following organs and/or organ systems may be aggravated and/or damaged by overexposure to the material. Heart, kidney, liver, auditory system, blood, nervous system, lungs. In severe cases death may result.

**ROUTES OF ENTRY:** Inhalation, skin absorption, skin contact, eye contact.

**TARGET ORGAN STATEMENT:** Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects; mild, reversible kidney effects; nasal damage.

**SENSITIZATION:** While there is no evidence that industrially acceptable levels of toluene vapors (e.g., the TLV) have produced cardiac effects in humans, animal studies have shown that inhalation of high levels of toluene produced cardiac sensitization. Such sensitization may cause fatal changes in heart rhythms. This latter effect was shown to be enhanced by hypoxia or the injection of adrenalinlike agents. Prolonged and repeated exposures to high concentrations of toluene have resulted in hearing loss in laboratory rats. While the effect of solvents on the human auditory system is uncertain, solvent abusers exposed to high doses of toluene show signs of hearing loss, and occupational exposure to toluene may interact with noise in causing hearing loss in the work environment. The effects of solvents on human hearing are uncertain. Solvent abusers and noise interaction with toluene in the work environment may cause signs of hearing loss.

**COMMENTS HEALTH:** Possibility of organ or organ system damage from prolonged exposure. Refer to toxicology section 11 for detailed information.

**HEALTH HAZARDS:** Light hydrocarbons like this one have been associated with cardiac sensitization in
abuser situations. Hypoxia or the injection of adrenaline-like substances enhances these effects.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Wt.%</th>
<th>CAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>30 - 38</td>
<td>000067-64-1</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>17 - 25</td>
<td>000142-82-5</td>
</tr>
<tr>
<td>Xylenes (o-,m-,p- isomers)</td>
<td>15 - 22</td>
<td>001330-20-7</td>
</tr>
<tr>
<td>Ethyl benzene</td>
<td>2 - 4.5</td>
<td>100-41-4</td>
</tr>
<tr>
<td>Benzene, methyl-</td>
<td>0 - 0.2</td>
<td>000108-88-3</td>
</tr>
<tr>
<td>Benzene</td>
<td>0 - 0.0022</td>
<td>71-43-2</td>
</tr>
<tr>
<td>2-Propanol</td>
<td>11 - 18</td>
<td>000067-63-0</td>
</tr>
<tr>
<td>1-Methyl-2-pyrrolidinone</td>
<td>4 - 7</td>
<td>872-50-4</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**EYES:** Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling persist, contact a physician.

**SKIN:** Remove contaminated clothing/shoes. Wipe off excess material from exposed area. Flush with large amounts of water for at least 15 minutes, by the clock, and follow by washing with soap, if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment. Do not reuse clothing until cleaned.

**INGESTION:** If swallowed, DO NOT INDUCE vomiting. If conscious, have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. DO NOT GIVE LIQUIDS TO A DROWSY, CONVULSING OR UNCONSCIOUS PERSON. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Transport to nearest medical facility for additional treatment.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Seek immediate medical attention.

**NOTES TO PHYSICIAN:** Treat symptomatically. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. If pain, blinking, tears, or redness continue, patient should contact ophthalmologist.

**ADDITIONAL INFORMATION:** Light hydrocarbons like xylene, have been associated with cardiac sensitization in abuser situations. Hypoxia or the injection of adrenaline-like substances enhances these effects.

### 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** < (20°F) Lowest flash of chemical constituents within product.

**FLammable LIMITS:** 0.01 to 0.128
AUTOIGNITION TEMPERATURE: Not Determined

EXTINGUISHING MEDIA: Use water fog, "alcohol" foam, dry chemical, or CO2. Do not use a direct stream of water. Material will float and can be re-ignited on surface of water.

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide and unidentified organic compounds may be formed during combustion.

EXPLOSION HAZARDS: When heated above the flash point, this material emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

FIRE FIGHTING PROCEDURES: WARNING! Flammable Liquid. Vapors are heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Clear fire area of unprotected personnel. Do not enter confined fire space without full bunker gear, including a positive pressure NIOSH approved SCBA. Cool fire exposed containers with water.

FIRE FIGHTING EQUIPMENT: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Only specially trained or qualified personnel should handle the emergency.

LARGE SPILL: Ventilate area of leak or spill. Remove all sources of ignition and provide ventilation. Clean-up personnel require protective clothing and respiratory protection from vapors. Only specially trained or qualified personnel should handle the emergency. Approach release from upwind. Stop or control leak, if this can be done without undue risk. Control runoff and isolate discharged material for proper disposal.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Keep material out of storm sewers and ditches which lead to waterways.

GENERAL PROCEDURES: WARNING. Flammable. Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Only specially trained or qualified personnel should handle the emergency.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Keep away from heat, sparks, and flame. Surfaces that are hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.

HANDLING: Do not taste or swallow. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep away from heat, sparks, and flame. Surfaces that are hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.
**STORAGE:** Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

**COMMENTS:** KEEP OUT OF REACH OF CHILDREN! 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; they may explode and cause injury or death.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)</th>
<th>EXPOSURE LIMITS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OSHA PEL</td>
<td>ACGIH TLV</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>ppm</td>
<td>mg/m³</td>
</tr>
<tr>
<td>Acetone</td>
<td>TWA 1000</td>
<td>2400</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td></td>
</tr>
<tr>
<td>n-Heptane</td>
<td>TWA 400%</td>
<td>400%</td>
</tr>
<tr>
<td>Xylenes (o-,m-,p- isomers)</td>
<td>TWA 100</td>
<td>435</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150</td>
</tr>
<tr>
<td>Ethyl benzene</td>
<td>TWA 100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL 300 [1]</td>
<td>[1]</td>
</tr>
<tr>
<td>Benzene</td>
<td>TWA 1% [3]</td>
<td>[3]</td>
</tr>
<tr>
<td>2-Propanol</td>
<td>TWA 400 ppm</td>
<td>980 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL ppm</td>
<td>mg/m³</td>
</tr>
</tbody>
</table>

**OSHA TABLE COMMENTS:**
1. C = Ceiling
2. S = Skin
3. Carcinogen
4. NL = Not Listed

**ENGINEERING CONTROLS:** Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

**PERSONAL PROTECTIVE EQUIPMENT**

**EYES AND FACE:** Use chemical safety goggles and/or full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas.
SKIN: Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY: If exposure may or does exceed occupational exposure limits (Sec. 8) use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-suppling respirator or an air-purifying respirator for organic vapors.

PROTECTIVE CLOTHING: Where splashing is possible, wear impervious clothing and boots.

WORK HYGIENIC PRACTICES: Use good personal hygiene when handling this product. Wash hands after use, before eating, drinking, smoking, or using the toilet.

OTHER USE PRECAUTIONS: May be harmful or fatal if swallowed. May irritate body tissues. Use with adequate ventilation. Avoid breathing vapor. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Aromatic hydrocarbon odor.

APPEARANCE: Clear, water-white liquid.

COLOR: Clear, colorless to slightly yellow-colored liquid.

pH: Essentially neutral.

PERCENT VOLATILE: 100

BOILING POINT: to (293°F)

FREEZING POINT: NDA = no data available.

MELTING POINT: Not Established

FLASHPOINT AND METHOD: < (20°F) Lowest flash of chemical constituents within product.

SOLUBILITY IN WATER: Negligible

EVAPORATION RATE: Not Determined

DENSITY: 6.652

SPECIFIC GRAVITY: ~ 0.780 to 0.810 at (60°F)

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Avoid heat, sparks, flame and contact with strong oxidizing agents. Do not store or handle in aluminum equipment at temperatures above 120 deg. F.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation. Burning may produce carbon dioxide, carbon monoxide, nitrogen oxides.

INCOMPATIBLE MATERIALS: Strong oxidants and acids. Reacts with chlorinating agents to form the amide. Reacts with sulfur or carbon disulfide at high temperatures and pressures. Avoid heat, flame and other sources of ignition.

COMMENTS: Xylene will attack some forms of plastics, rubber and coatings.

11. TOXICOLOGICAL INFORMATION

ACUTE

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ORAL LD&lt;sub&gt;50&lt;/sub&gt; (rat)</th>
<th>DERMAL LD&lt;sub&gt;50&lt;/sub&gt; (rabbit)</th>
<th>INHALATION LC&lt;sub&gt;50&lt;/sub&gt; (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Methyl-2-pyrrolidinone</td>
<td>3914</td>
<td>2200 to 4000</td>
<td>&gt; 5100</td>
</tr>
</tbody>
</table>

EYES: 9.0 /110 (rabbit)
Notes: Draize - xylene

DERMAL LD<sub>50</sub>:
Notes: Dermal LD50 for Xylene: about 5 ml/kg (rabbit).
Dermal LD50 for Benzene, a constituent of Toluene, Xylene and n-Heptane: greater than 14000 mg/kg (rabbit).

SKIN ABSORPTION:
Notes: Skin irritation: slight to moderate (rabbit)

ORAL LD<sub>50</sub>:
Notes: Oral LD50 for Toluene: 636 mg/kg (rat).
Oral LD50 for Benzene, a constituent of Toluene, Xylene and n-Heptane: 5,000 mg/kg (rat).

INHALATION LC<sub>50</sub>:
Notes: LC50 for Benzene a constituent in Toluene, Xylene and n-Heptane is ~ 4000 (NINHL rat).

SKIN EFFECTS: Irritating to skin.

CHRONIC: Cardiovascular system: Chronic abuse of similar materials has been associated with irregular heart rhythms and cardiac arrest. Central nervous system: Repeated exposure affects the nervous system. Kidney: caused kidney effects in male rats which are not considered relevant to humans.

CARCINOGENICITY

IARC: While there is no evidence that industrially acceptable levels of toluene vapors (e.g., the TLV) have produced cardiac effects in humans, animal studies have shown that inhalation of high levels of toluene produced cardiac sensitization. Such sensitization may cause fatal changes in heart rhythms. This latter effect was shown to be enhanced by hypoxia or the injection of adrenalinlike agents. Prolonged and repeated exposures to high concentrations of toluene have resulted in hearing loss in laboratory rats. While the effect of solvents on the human auditory system is uncertain, solvent abusers
exposed to high doses of toluene show signs of hearing loss, and occupational exposure to toluene may interact with noise in causing hearing loss in the work environment. The effects of solvents on human hearing are uncertain. Solvent abusers and noise interaction with toluene in the work environment may cause signs of hearing loss.

Notes: Carcinogenicity: Chronic inhalation exposure to 750 ppm ethyl benzene vapor produced increased incidences of renal tubular hyperplasia and neoplasms (males and females) and testicular adenomas in F344/N rats and alveolar/bronchiolar (males) and hepatocellular (females) neoplasms in B6C3F1 mice. Genetic toxicology studies found ethyl benzene not to be mutagenic or clastogenic. The relevance of these effects to humans are unclear. Ethylbenzene is listed by the IARC as a Group 2B - possible carcinogen.

SENSITIZATION: Repeat Dose Testing: While there is no evidence that industrially acceptable levels of light hydrocarbon vapors (e.g., the occupational exposure limit) have produced cardiac effects in humans, animals studies have shown that inhalation of high levels produced cardiac sensitization. Such sensitization may cause fatal changes in heart rhythms, which was shown to be enhanced by hypoxia or the injection of adrenaline-like substances.

TARGET ORGANS: The effects of solvents on human hearing are uncertain. Solvent abusers and noise interaction with xylene in the work environment may cause signs of hearing loss.

TERATOGENIC EFFECTS: Prolonged and repeated exposures to high concentrations of some volatile hydrocarbon solvents have resulted in hearing loss in rats. Solvent abusers and noise interaction with these solvents in the work environment may cause symptoms of hearing loss.

MUTAGENICITY: Toluene is not known to be mutagenic or carcinogenic. However, the available human and experimental data are limited and insufficient to assess carcinogenic potential. Toluene is not listed as a carcinogen by NTP, IARC, or OSHA. Intentional abuse of toluene vapors has been linked to damage of brain, liver, kidney and to death. Many case studies involving abuse during pregnancy clearly indicate that toluene is a developmental toxicant. Developmental toxic effects comparable to those observed in humans have been seen in lab animals but the effects were generally associated with maternal toxicity.

GENERAL COMMENTS: Reproductive and Developmental Toxicity: In developmental toxicity studies conducted in laboratory animals, there is no evidence of teratogenicity following inhalation exposure to xylene, but delayed development and behavioral impairments have been observed at doses levels causing no or only slight maternal toxicity. Neurotoxicity: Prolonged and repeated exposures to high concentrations of some volatile hydrocarbon solvents have resulted in hearing loss in rats. Solvent abusers and noise interaction with these solvents in the work environment may cause symptoms of hearing loss. Short term repeated inhalation exposure of humans to m-xylene (200 ppm or greater) was reported to produce slight impairment of vestibular and visual function and reaction time. In these studies, there was no evidence of cumulative effects but some evidence of tolerance or adaptation. Other Information: Over exposures of humans to xylene or xylene solvent mixtures produced predominated central nervous system (CNS) effects with less common effects reported to the lung, gastrointestinal tract, liver, kidney and heart. High exposures to xylene in some animal studies, often at levels toxic to the mother, affected embryo/fetal development. The significance of this finding to humans is not known. Ethylbenzene Acute Data: LD50 Oral Rat = 3500 mg/kg, LC50 Inhalation Rat = 4000 ppm for 4 hours, LD50 Dermal Rabbit = 17.8 mL/kg.

COMMENTS: This product may contain benzene (CAS No. 71-43-2) and Toluene (CAS 108-88-3) at less than 1% weight. Acute Toxicity for Xylene: Dermal - LD50, results: Approximately 5 ml/kg (rabbit); Inhalation - LC50, results: 6700 ppm (v) (rat) 4 hour(s); Oral - LD50, results: 3.523 g/kg (rat).
Eye Irritation: Draize - 9.0/110 (rabbit), skin irritation: Slight to moderate (rabbit). Repeat Dose Testing: While there is no evidence that industrially acceptable levels of light hydrocarbon vapors (e.g., the occupational exposure limit) have produced cardiac effects in humans, animals studies have shown that inhalation of high levels produced cardiac sensitization. Such sensitization may cause fatal changes in heart rhythms, which was shown to be enhanced by hypoxia or the injection of adrenaline-like substances. **Carcinogenicity:** Chronic inhalation exposure to 750 ppm ethyl benzene vapor produced increased incidences of renal tubular hyperplasia and neoplasma (males and females) and testicular adenomas in F344/N rats and alveolar/bronchiolar (males) and hepatocellular (females) neoplasma in B6C3F1 mice. Genetic toxicology studies found ethyl benzene not to be mutagenic or clastogenic. The relevance of these effects to humans are unclear. Ethylbenzene is listed by the IARC as a Group 2B - possible carcinogen. Reproductive and Developmental Toxicity: In developmental toxicity studies conducted in laboratory animals, there is no evidence of teratogenicity following inhalation exposure to xylene, but delayed development and behavioral impairments have been observed at does levels causing no or only slight maternal toxicity. **Neurotoxicity:** Prolonged and repeated exposures to high concentrations of some volatile hydrocarbon solvents have resulted in hearing loss in rats. Solvent abusers and noise interaction with these solvents in the work environment may cause symptoms of hearing loss. Short term repeated inhalation exposure of humans to m-xylene (200 ppm or greater) was reported to produce slight impairment of vestibular and visual function and reaction time. In these studies, there was no evidence of cumulative effects but some evidence of tolerance or adaptation. Other Information: Over exposures of humans to xylene or xylene solvent mixtures produced predominated central nervous system (CNS) effects with less common effects reported to the lung, gastrointestinal tract, liver, kidney and heart. High exposures to xylene in some animal studies, often at levels toxic to the mother, affected embryo/fetal development. The significance of this finding to humans is not known. Ethylbenzene Acute Data: LD50 Oral Rat = 3500 mg/kg, LC50 Inhalation Rat = 4000 ppm for 4 hours, LD50 Dermal Rabbit = 17.8 mL/kg.

### 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL DATA:** When 1-methyl-2-pyrrolidinone is released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material is not expected to evaporate significantly. this material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

**ECOTOXICOLOGICAL INFORMATION:** Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill response plan should be developed and implemented.

**AQUATIC TOXICITY (ACUTE)**

96-HOUR EC$_{50}$: > 100 mg/l (fish)

**Notes:** Results are for 1-methyl-2-pyrrolidinone.

### 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** The preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.
EMPTY CONTAINER: KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue 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.

RCRA/EPA WASTE INFORMATION: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Flammable Liquids, N.O.S.
TECHNICAL NAME: (Acetone, Xylene)
PRIMARY HAZARD CLASS/DIVISION: 3
UN/NA NUMBER: UN 1993
PACKING GROUP: II
NAERG: 128
LABEL: Flammable liquid

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: This product should be reported as an immediate (acute) health hazard, delayed (chronic) health hazard, and a fire hazard.

FIRE: Yes PRESSURE GENERATING: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

313 REPORTABLE INGREDIENTS: Xylenes (1330-20-7), ethyl benzene (100-41-4), toluene (108-88-3), benzene (71-43-2)

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: To the best of our knowledge, this product is not listed as an extremely hazardous substance.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: Component RQ (lbs)
Acetone 5000
Xylenes (o-, m-, p- isomers) 100
Toluene 1000
Ethylbenzene 1000

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: All ingredients are on the TSCA inventory or are not required to be listed on
the TSCA inventory.

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following chemicals known to the State of California to cause cancer and reproductive toxicity: Benzene, Toluene

16. OTHER INFORMATION

REASON FOR ISSUE: New product.

PREPARED BY: P. Rodabaugh

REVISION SUMMARY: New MSDS

HMIS RATING

| HEALTH: | 2 |
| FLAMMABILITY: | 3 |
| PHYSICAL HAZARD: | 0 |
| PERSONAL PROTECTION: | H |

NFPA CODES

MANUFACTURER DISCLAIMER: The information contained herein is based on the data available to us and is believed to be accurate. However, Tarr Acquisition, LLC (Tarr, LLC) makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Tarr, LLC assumes no responsibility for injuries from the use of the product described herein.