

MATERIAL SAFETY DATA SHEET



Date Issued: 07/17/2006

MSDS No: 4105A

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Revision No: 2

JRS LACQUER THINNER

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: JRS LACQUER THINNER

PRODUCT CODE: 4105A

MANUFACTURER

Tarr Acquisition, LLC

4115 W. Turney Ave.

Phoenix AZ 85019

Service Number: 602-233-2000

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (US Transportation) :(800) 424 - 9300

CANUTEC (Canadian Transportation) :(613) 996 - 6666

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: WARNING! Flammable liquid and vapor. Harmful or fatal if swallowed. Vapor harmful.

POTENTIAL HEALTH EFFECTS

EYES: Liquid is moderately irritating to the eyes. High vapor concentrations may also be irritating.

SKIN: Liquid is mildly irritating to the skin. 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; may product CNS depression. Ingestion of product may result in vomiting; aspiration (breathing) of vomitus into the lungs must be avoided as even small quantities may result in aspiration pneumonitis.

INHALATION: Vapors may be irritating to the nose, throat, and respiratory tract. 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: 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.

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. Laboratory studies have shown that petroleum distillates may cause kidney, liver or lung damage. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

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.

REPRODUCTIVE TOXICITY

TERATOGENIC EFFECTS: Contains Methanol which has been established as a teratogen by inhalation. See Sec.11 for details.

MEDICAL CONDITIONS AGGRAVATED: Preexisting diseases in or history of ailments involving skin, central nervous system, liver and kidney.

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: Male rats exposed for 90 days by inhalation to vapors of similar solvents showed evidence of kidney damage. The relevance of this effect to humans is unknown. In one of the studies a low grade anemia was also observed.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name | Wt. % | CAS |
|----------------------------------|--------------|-------------|
| Benzene, methyl- | 18 - 21 | 000108-88-3 |
| Benzene | 0.018 - 0.02 | 000071-43-2 |
| Isobutyl acetate | 20 - 24 | 000110-19-0 |
| Ethyl methyl ketone | 5 - 7 | 000078-93-3 |
| 2-Propanol | 11 - 13 | 000067-63-0 |
| Methanol | 2 - 3 | 000067-56-1 |
| Solvent naphtha, light aliphatic | 33 - 36 | 064742-89-8 |
| N-butanol | 2 - 4 | 000071-36-3 |

COMMENTS: Toluene may contain benzene (CAS 71-43-2) at a concentration less than 30 ppm.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get immediate medical attention.

SKIN: Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

INGESTION: DO NOT INDUCE VOMITING. Do not attempt to give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

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: If more than 2.0 ml per kg has been ingested and vomiting has not occurred, emesis should be induced with supervision. Keep victim's head below hips to prevent aspiration.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: (29°F) TAG CC

FLAMMABLE LIMITS: 0.01 to 0.071

AUTOIGNITION TEMPERATURE: Not Determined

EXTINGUISHING MEDIA: Use water fog, "alcohol" foam, dry chemical, or CO₂.

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. 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: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

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: Wash thoroughly after handling. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

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

| OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200) | | | | | | | |
|---|-------------|------------------------|-------------------------|-------------------|-------------------------|--------------------|-------------------------|
| | | EXPOSURE LIMITS | | | | | |
| | | OSHA PEL | | ACGIH TLV | | SupplierOEL | |
| Chemical Name | | ppm | mg/m³ | ppm | mg/m³ | ppm | mg/m³ |
| Benzene, methyl- | TWA | 200 | | 50 ^[2] | 188 ^[2] | | |
| | STEL | 300 ^[1] | ^[1] | | | | |
| Benzene | TWA | 1 % ^[3] | 5 ^[3] | 0.5 % | 1.6 | | |
| | STEL | | | 2.5 | 8 | | |
| Isobutyl acetate | TWA | 150 | 700 | 150 | 713 | | |
| Ethyl methyl ketone | TWA | 200 | 590 | 200 | 590 | | |
| | STEL | | | 300 | 885 | | |
| 2-Propanol | TWA | 400 ppm | 980 mg/m ³ | 200 ppm | 490 mg/m ³ | NL ^[4] | NL ^[4] |
| | STEL | ppm | mg/m ³ | 400 ppm | 960 mg/m ³ | NL | NL |
| Methanol | TWA | 200 | 260 | 200 | 262 | | |
| | STEL | | | 250 | 328 | | |
| Solvent naphtha, light aliphatic | TWA | ^[5] | ^[5] | | | 100 ^[6] | 400 ^[6] |
| N-butanol | TWA | 100 | 300 | 20 | | | |
| OSHA TABLE COMMENTS: 1. C = Ceiling 2. S = Skin 3. Carcinogen 4. NL = Not Listed 5. Our supplier has adopted, as Interim Standards, the OSHA PELs that were established in 1989 and later rescinded. 6. In the absence of occupational exposure standards for this product, it is recommended that these values are adopted. | | | | | | | |

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-supplying 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: Pungent odor.

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

pH: Essentially neutral.

VAPOR PRESSURE: 3.7 - 73

VAPOR DENSITY: Heavier than air.

BOILING POINT: to (232°F)

FREEZING POINT: NDA = no data available.

MELTING POINT: No data available.

FLASHPOINT AND METHOD: (29°F) TAG CC

SOLUBILITY IN WATER: Soluble in most ketones and hydrocarbons, solubility negligible in water.

EVAPORATION RATE: 2.02 (n-Butyl Acetate=1)

DENSITY: 6.6395

SPECIFIC GRAVITY: 0.797 to 1.000 (water=1)

(VOC): 6.640 lbs./gal.

Notes: 795.7 gms/liter

COMMENTS: HAP Content: 1.91 lbs./gal. as Methanol, 0.20 lbs./gal. MEK, 0.40 lbs./gal and Toluene 1.31 lbs./gal.

10. STABILITY AND REACTIVITY

STABLE: Yes

STABILITY: Avoid heat, sparks, flame and contact with strong oxidizing agents.

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: 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.

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

INCOMPATIBLE MATERIALS: Strong oxidizers.

11. TOXICOLOGICAL INFORMATION

ACUTE

| Chemical Name | ORAL LD ₅₀ (rat) | DERMAL LD ₅₀ (rabbit) | INHALATION LC ₅₀ (rat) |
|----------------------------------|--------------------------------|-------------------------------------|--------------------------------------|
| Benzene | 636 MG/KG Rat | > 14000 MG/KG Rabbit | ~ 4000 (NINHL rat) |
| Solvent naphtha, light aliphatic | > 2000 MG/KG Rat | > 2000 mg/kg (rat) | > 5000 ppm / 1 hour (rat) |

DERMAL LD₅₀: mg/kg (rat)

Notes: LD50 for Benzene, a constituent of Toluene: greater than 14000 mg/kg (rabbit). This product may contain benzene (CAS 71-43-2) at a concentration less than 300 ppm.

SKIN ABSORPTION: mL/kg

Notes: Isobutyl acetate: Skin irritation (rabbit): slight

ORAL LD₅₀: mg/kg (mouse)

Notes: LD50 for Benzene is 5,000 mg/kg (rat). This product may contain benzene (CAS 71-43-2) at a concentration less than 300 ppm.

INHALATION LC₅₀: gm/m³/2H (mouse)

Notes: Data above is for n butyl acetate. Solvent naphtha, light aliphatic: Male rats exposed by prolonged and repeated inhalation to high vapor concentrations of similar solvents showed evidence of kidney damage. The relevance of this effect to humans is unknown. LC50 is for Benzene, a constituent of Toluene: 4000 (NINHL rat) This product may contain benzene (CAS 71-43-2) at a concentration less than 300 ppm.

EYE EFFECTS: May be irritating to eyes.

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: The International Agency for Research of Cancer (IARC) has determined that exposure to ethanol through chronic human consumption of alcoholic beverages can cause cancer. The relevance of this finding to ethanol exposure in industrial environments is uncertain.

Ethylbenzene has been shown to cause cancer in laboratory animals. The relevance of this finding to humans is uncertain. The IARC has classified ethylbenzene as a possible human carcinogen.

Notes: This product may contain benzene (CAS No. 71-43-2) at a concentration less than 300 ppm.

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.

REPRODUCTIVE EFFECTS: In pregnant female rodents exposed by inhalation to high concentrations of methyl ethyl ketone (MEK) vapor (15x the OSHA PEL/TWA) minor developmentally toxic effects to the fetuses were observed. MEK has demonstrated to potentiate (i.e. shorten the time of onset) the peripheral neuropathy caused by either n hexane or methyl n butyl ketone. MEK by itself has not been demonstrated to cause peripheral neuropathy. MEK can potentiate the neurotoxicity of hexacarbon compounds (n hexane, methyl n butyl ketone and 2,5 hexanedione) and the liver and kidney toxicity of haloalkane solvents. Laboratory studies have shown that petroleum distillates may cause kidney, liver, or lung damage. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Toluene may be harmful to the human fetus based on positive test results with laboratory animals. Case studies show that prolonged intentional abuse of toluene during pregnancy can cause birth defects in humans. Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain.

TARGET ORGANS: Laboratory studies have shown that petroleum distillates may cause kidney, liver, or lung damage. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

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: Developmental Information: This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

COMMENTS: This product may contain benzene (CAS No. 71-43-2) at less than 1 % weight.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Do not flush to sewer.

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

BIOACCUMULATION/ACCUMULATION: LC50 for Benzene a constituent in Toluene is ~ 4000 (NINHL rat). Solvent naphtha, light aliphatic: Male rats exposed by prolonged and repeated inhalation to high vapor concentrations of similar solvents showed evidence of kidney damage. The relevance of this effect to humans is unknown.

AQUATIC TOXICITY (ACUTE): LC50 for Benzene a constituent in Toluene is ~ 4000 (NINHL rat). Solvent naphtha, light aliphatic: Male rats exposed by prolonged and repeated inhalation to high vapor concentrations of similar solvents showed evidence of kidney damage. The relevance of this effect to humans is unknown.

96-HOUR LC₅₀: LC50 for Benzene a constituent in Toluene is ~ 4000 (NINHL rat). Solvent naphtha, light aliphatic: Male rats exposed by prolonged and repeated inhalation to high vapor concentrations of similar solvents showed evidence of kidney damage. The relevance of this effect to humans is unknown.

48-HOUR EC₅₀: LC50 for Benzene a constituent in Toluene is ~ 4000 (NINHL rat). Solvent naphtha, light aliphatic: Male rats exposed by prolonged and repeated inhalation to high vapor concentrations of similar solvents showed evidence of kidney damage. The relevance of this effect to humans is unknown.

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

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: Paint Related Material

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: UN 1263

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: Methyl alcohol (67-56-1), toluene (108-88-3), benzene (71-43-2), methyl ethyl ketone (78-83-3)

TITLE III NOTES: This product contains Solvent naphtha, light aliphatic, which may contain the following constituents: heptane, n- (CAS 142-82-5) less than 2.5% by weight, methylcyclohexane (CAS 108-87-2) less than 2.5% by weight and cyclohexane (CAS 110-82-7) less than 1.5% by weight.

302/304 EMERGENCY PLANNING

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

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 substance(s) known to the State of California to cause cancer.: Toluene, Benzene.

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 substance(s) known to the State of California to cause reproductive harm.: Toluene, Benzene.

16. OTHER INFORMATION

PREPARED BY: Compliance Dept.

REVISION SUMMARY: Revision #: 2. This MSDS replaces the November 12, 2007 MSDS.

HMIS RATING

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

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.