

MATERIAL SAFETY DATA SHEET



Date Issued: 06/03/2009

MSDS No: CCL

CAVALLE CLEANER

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: CAVALLE CLEANER

PRODUCT CODE: CCL

MANUFACTURER

Tarr, LLC

P.O. Box 12570

Portland OR 97212

Service Number: 503-288-5294

24 HR. EMERGENCY TELEPHONE NUMBERS

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

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

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: DANGER! Poison. Flammable. Contains methanol. Cannot be made non-poisonous. Liquid and vapor harmful. May be fatal or cause blindness if swallowed. Avoid prolonged breathing of vapors. Avoid contact with eyes and skin. Use only in well ventilated areas.

POTENTIAL HEALTH EFFECTS

EYES: Liquid is severely irritating to the eyes. High vapor concentrations are also 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: POISONOUS. May be fatal or cause blindness if swallowed. Ingestion may have a narcotic effect including signs of CNS depression such as dizziness, headache, drowsiness, loss of coordination, and fatigue.

INHALATION: Excessive exposure to this product may cause headache, CNS depression, drowsiness, dizziness, loss of appetite, irritation of the respiratory tract, drunkenness, unconsciousness, or death.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Material is a severe eye irritant. Direct contact with the liquid or exposure to vapors or mists may cause stinging, tearing, redness, swelling and eye damage.

SKIN: This material is a skin irritant. Direct contact may cause redness or burning, drying and cracking of the skin.

INGESTION: Ingestion of excessive quantities may cause irritation of the digestive tract, and sign of nervous system depression (headache, drowsiness, dizziness, loss of coordination, and fatigue).

INHALATION: Breathing high concentrations of vapors or mists may cause irritation of the nose or

throat and signs of nervous system depression.

ACUTE TOXICITY: Shortness of breathing, confused behavior, redness of skin, swelling of tissues, watery eyes, and nausea. The vapor irritates the eyes and respiratory tract. The substance may cause effects on the central nervous system, liver, kidneys, and gastrointestinal tract.

CHRONIC EFFECTS: 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. Not listed as a carcinogen by the NTP, IARC, or OSHA.

CARCINOGENICITY: Not listed as a carcinogen by the NTP, IARC, or OSHA.

MEDICAL CONDITIONS AGGRAVATED: Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. May aggravate pre-existing disorders of these organs: anemia, kidney damage, lung damage, and effects on hearing.

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

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. Can cause optic nerve damage (blindness).

COMMENTS: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: metallic taste, redness of the face and neck, mouth and throat irritation (soreness, dry or scratchy feeling, cough), stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), lung irritation, tight feeling in the chest, central nervous system excitation (giddiness, liveliness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, temporary changes in mood and behavior, leg cramps, involuntary eye movement, muscle weakness, low blood pressure, pain in the abdomen and lower back, effects on heart rate, respiratory depression coordination, confusion, difficult breathing, irregular heartbeat, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), elevated carbon monoxide levels in the blood, high blood sugar, blood in the urine, blood abnormalities (breakage of red blood cells), narcosis (dazed or sluggish feeling), anesthesia, lung edema (fluid buildup in the lung tissue), kidney damage, liver damage, visual impairment (including blindness), respiratory failure, coma and death.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Methanol	15 - 25	67-56-1
2-Propanol	31 - 41	67-63-0
Water	1 - 9	7732-18-5
Acetone	33 - 43	67-64-1
Benzene, methyl-	< 1	108-88-3
Ethyl methyl ketone	< 1	78-93-3
Xylenes (o-,m-,p- isomers)	< 1	1330-20-7

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.

SKIN: Remove contaminated clothing/shoes. Flush skin with water for at least 15 minutes. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.

INGESTION: Call poison control center or get medical help immediately. If patient is conscious and alert, give 8 ounces of water or juice and induce vomiting, keeping patient's head below hips to prevent aspiration of liquid into lungs.

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 victim is a child, give no more than 1 glass of water and 15cc (1 tablespoon) syrup of ipecac. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

ADDITIONAL INFORMATION: Near fatal exposures may result in congestive effects to a wide variety of organs.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: < (4°F) to (53°F) TAG CC. Lowest flash of chemical constituents within product.

FLAMMABLE LIMITS: 2.3 to 12.8

AUTOIGNITION TEMPERATURE:

Notes: Not yet Determined

GENERAL HAZARD: Flammable liquid and vapor.

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.

OTHER CONSIDERATIONS: Product emits vapors which are heavier than air and may travel long distances.

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. Water may be ineffective. Water may be used to keep fire-exposed containers cool until fire is out. Use fog nozzles if water is used.

FIRE FIGHTING EQUIPMENT: The use of SCBA is recommended for firefighters. Water spray may be used to cool containers exposed to heat or flame.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield carbon monoxide and carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Absorb liquid on vermiculite, floor absorbent or other absorbent material. Personal not wearing proper personal protective equipment should be excluded from area of spill.

LARGE SPILL: Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of leak if safe to do so. Dike and contain spill. Prevent from entering drains, sewers, streams or other bodies of water. If runoff occurs, notify authorities as required. Remove with vacuum trucks or pump into clean storage/salvage vessels for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers 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.

RELEASE NOTES: 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.

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.

STORAGE: Store away from heat, sparks, and open flame. Keep containers tightly closed when not in use.

Do not weld, cut, grind, solder, or drill on or near empty containers. Empty containers may contain explosive concentrations of product vapors.

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/m ³	ppm	mg/m ³	ppm	mg/m ³
Methanol	TWA	200	260	200	262		
	STEL			250	328		
2-Propanol	TWA	400 ppm	980 mg/m ³	200 ppm	490 mg/m ³	NL ^[1]	NL ^[1]
	STEL	ppm	mg/m ³	400 ppm	960 mg/m ³	NL	NL
Acetone	TWA	1000	2400	500			
	STEL			750			
Benzene, methyl-	TWA	200		50 ^[3]	188 ^[3]		
	STEL	300 ^[2]	^[2]				
Ethyl methyl ketone	TWA	200	590	200	590		
	STEL			300	885		
Xylenes (o-,m-,p- isomers)	TWA	100	435	100	434		
	STEL			150	651		
OSHA TABLE COMMENTS: 1. NL = Not Listed 2. C = Ceiling 3. S = Skin							

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

COMMENTS: 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Pungent odor.

APPEARANCE: Clear, water-white liquid.

COLOR: Clear, colorless liquid.

pH: NA = Not Applicable

PERCENT VOLATILE: 100

VAPOR PRESSURE: Not Established

VAPOR DENSITY: Heavier than air.

BOILING POINT: (131°F) to (212°F)

FREEZING POINT: No data available.

MELTING POINT: Not Determined

FLASHPOINT AND METHOD: < (4°F) to (53°F) TAG CC. Lowest flash of chemical constituents within product.

SOLUBILITY IN WATER: Miscible

EVAPORATION RATE: Not Determined

DENSITY: 6.61

SPECIFIC GRAVITY: 0.790 to 0.80

MOLECULAR WEIGHT: 32.1

10. STABILITY AND REACTIVITY

STABLE: Yes

STABILITY: Stable.

POLYMERIZATION: Avoid heat, flame, and other sources of ignition.

CONDITIONS TO AVOID: Avoid heat, sparks, flame and contact with strong oxidizing agents. Prevent vapor accumulation.

HAZARDOUS DECOMPOSITION PRODUCTS: May form carbon dioxide, carbon monoxide, various hydrocarbons.

INCOMPATIBLE MATERIALS: The substance can form explosive peroxides on contact with strong oxidants such as acetic acid, nitric acid, and hydrogen peroxide. Reacts with chloroform and bromoform under basic conditions, causing fire and explosion hazard. Attacks plastic.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
Xylenes (o-,m-,p- isomers)	4300 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	6700 ppm / 4 hours (rat)

DERMAL LD₅₀: 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: Xylene: Skin irritation: slight to moderate (rabbit)

ORAL LD₅₀: Oral LD50 for Toluene: 636 mg/kg (rat).

Oral LD50 for Benzene, a constituent of Toluene and Xylene: 5,000 mg/kg (rat).

INHALATION LC₅₀: LC50 is for Benzene. 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: 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

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: 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.

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: 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 of the fetuses were observed. MEK has been 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 5-hexanedione) and the liver and kidney toxicity of haloalkane solvents.

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.

COMMENTS: Poison. May be fatal or cause blindness, if swallowed. Cannot be made nonpoisonous.

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.

AQUATIC TOXICITY (ACUTE): 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.

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: Flammable Liquids, N.O.S. (Acetone, Isopropanol)

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: UN 1993

PACKING GROUP: II

NAERG: 128

REPORTABLE QUANTITY (RQ) UNDER CERCLA: 5,000

LABEL: Flammable liquid

15. REGULATORY INFORMATION

UNITED STATES

DOT LABEL SYMBOL AND HAZARD CLASSIFICATION



Flammable Liquid

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), xylenes (1330-20-7)

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

Methyl Alcohol 5000

Toluene 1000

Methyl Ethyl Ketone 5000

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

RCRA STATUS: 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.

GENERAL COMMENTS: The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

16. OTHER INFORMATION

PREPARED BY: Compliance Dept.

REVISION SUMMARY: New MSDS

HMIS RATING

HEALTH:	3
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.