SAFETY DATA SHEET

Date Prepared : 04/09/2010
MSDS No : BW200
Date-Revised : 06/17/2015
Revision No : 3

BRAKE WASH 200

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BRAKE WASH 200

MANUFACTURER
Tarr, LLC
P.O. Box 12570
Portland, OR 97212
Product Stewardship: 503-288-5294

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

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Flammable Liquids, Category 1

GHS LABEL


Flame


Health hazard

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H224: Extremely flammable liquid and vapour.
H370: Causes damage to organs .
H302: Harmful if swallowed.

PRECAUTIONARY STATEMENT(S)

Prevention:

P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P270: Do not eat, drink or smoke when using this product.
P314: Get medical advice/attention if you feel unwell.
P240: Ground/bond container and receiving equipment.
P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

EMERGENCY OVERVIEW

BRAKE WASH 200

IMMEDIATE CONCERNS: DANGER! Extremely flammable liquid and vapor.

POTENTIAL HEALTH EFFECTS

EYES: Liquid is moderately irritating to the eyes. High vapor concentrations may also be irritating. Direct contact with the liquid or exposure to its vapors or mists may cause stinging, tearing, redness.

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 produce 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: High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness).

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

TARGET ORGAN STATEMENT: Cardiovascular system. Central nervous system (CNS).

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

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Toluene	8 - 15	108-88-3
Benzene	< 0.1	71-43-2
Solvent naphtha, light aliphatic	85 - 92	64742-89-8

COMMENTS: Solvent Naphtha, light aliphatic contains n-Heptane (CAS 142-82-5) and cyclohexane (CAS 110-82-7).

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. 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: 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.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

SKIN: Skin irritations signs and symptoms may include a burning sensation, redness, swelling and/or blisters.

INGESTION: If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty

in breathing, chest congestion, shortness of breath, and/or fever.

INHALATION: Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. 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.

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 (bluish skin). In severe cases death may result.

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

EXTINGUISHING MEDIA: Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not discharge extinguishing waters into the aquatic environment.

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. Product will float and can be reignited on surface water. Vapors are heavier than air. Vapors may travel across the ground and distant ignition is possible. Keep adjacent containers cool by spraying with water. Do not use water in a jet.

FIRE FIGHTING EQUIPMENT: Do not enter fire area without proper protection. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

6. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Under Section 311 of the Clean Water Act (CWA) this material is considered an oil. As such, spills into surface waters must be reported to the National Response Center at (800) 424-8802.

AIR SPILL: Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Vapor may form an explosive mixture with air. U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity to the National Response Center at (800) 424-8802.

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: Avoid breathing of or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Material

Safety Data Sheet. Use the information in this data sheet as input to risk assessment of local circumstances to help determine appropriate controls for safe handling storage and disposal of this material.

HANDLING: Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do Not smoke. Remove ignition sources. Avoid sparks. The vapor is heavier than air, spreads along the ground and distant ignition is possible. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (less than or equal to 1 m/sec until fill pipe submerged to twice its diameter, then less than or equal to 7 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Handle an open container with care in a well-ventilated area. Ventilate workplace in such a way that the Permissible Exposure Limit is not exceeded. Do not empty into drains.

STORAGE: Must be stored in a diked, well-ventilated area, away from sunlight, ignition sources and other sources of heat. Bulk storage tanks should be diked.

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**
Toluene	**TWA**	200		50 [2]	188 [2]		
	STEL	300 [1]	[1]				
Benzene	**TWA**	1 % [3]	[3]	0.5 %			
	STEL	5		2.5			
Solvent naphtha, light aliphatic	**TWA**	[4]	[4]			100 [5]	400 [5]

OSHA TABLE COMMENTS:

1. C = Ceiling

2. S = Skin

3. Carcinogen

4. Our supplier has adopted, as Interim Standards, the OSHA PELs that were established in 1989 and later rescinded.

5. 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: Chemical splash goggles and face shield in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. (Consult your industrial hygienist.)

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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, full chemically resistant protective clothing (e.g., acid suit) and boots are required.

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: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

COLOR: Clear, colorless liquid.

pH: Essentially neutral.

PERCENT VOLATILE: 100

FLASHPOINT AND METHOD: (-49°F)

FLAMMABLE LIMITS: 0.01 to 0.08

AUTOIGNITION TEMPERATURE: > (608°F)

VAPOR DENSITY: > 3 (Air=1)

BOILING POINT: > to (200°F)

FREEZING POINT: NDA = no data available.

SOLUBILITY IN WATER: Negligible

EVAPORATION RATE: > 1.0

DENSITY: 6.165

SPECIFIC GRAVITY: 0.69 to 0.78

(VOC): 6.165 LBS./gal.

10. STABILITY AND REACTIVITY

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

STABILITY: Stable under normal conditions.

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.

INCOMPATIBLE MATERIALS: Strong oxidizers.

11. TOXICOLOGICAL INFORMATION

BRAKE WASH 200

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)

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

Notes: At only 10% Volume of this blend, 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 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.

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.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: Solvent Naphtha, Light Aliphatic Acute Toxicity - Fish and Aquatic Invertebrates: Harmful: 10 less than LC/EC/IC50 less than or equal to 100 mg/l Algae: Low toxicity: LC/EC/IC50 greater than 100 mg/l.

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.

PRODUCT DISPOSAL: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.

EMPTY CONTAINER: KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue and

can be dangerous. Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. 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: (Naphtha, Toluene)

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: UN 1993

PACKING GROUP: II

NAERG: 128

REPORTABLE QUANTITY (RQ) UNDER CERCLA: 1000 lbs RQ for toluene, which is a percentage of this product.

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: Toluene (CAS 108-88-3),benzene (CAS 71-43-2), cyclohexane (CAS 110-82-7) and n-Hexane (CAS 110-54-3).

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 components of this product are on the TSCA inventory or are exempt from TSCA Inventory requirements under CFR 40 CFR 720.30.

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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

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

16. OTHER INFORMATION

REASON FOR ISSUE: Updated SDS information and changed to new format.

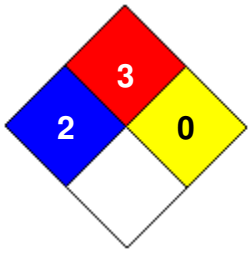
PREPARED BY: COMPLIANCE **Date-Revised:** 06/17/2015

REVISION SUMMARY: This MSDS replaces the 06/17/2015 MSDS. Revised: **Section 9:** ODOR. **Section 16:** ADDITIONAL MSDS INFORMATION.

HMIS RATING

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H

NFPA CODES



NFPA STORAGE CLASSIFICATION: These ratings are part of a specific hazard communication program and should be disregarded where individuals are not trained in the use of this hazard rating system. You should be familiar with the hazard communication programs applicable to your workplace.

HMIS RATINGS NOTES: The HMIS rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in the SDS must be considered.

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