MATERIAL SAFETY DATA SHEET

Date Issued: 12/07/2007
MSDS No: 4215A
Revision No: New MSDS

UV INK WASH FJ

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: UV INK WASH FJ
PRODUCT CODE: 4215A

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: CAUTION! COMBUSTIBLE LIQUID AND VAPOR. Harmful or fatal if swallowed. Can enter lungs and cause damage. May cause eye and skin irritation or injury.

POTENTIAL HEALTH EFFECTS

EYES: Liquid is moderately to severely irritating to the eyes causing pain, redness, swelling and blurred vision.

SKIN: Liquid is moderately irritating to the skin. May cause skin irritation. Symptoms may include redness, burning sensation 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 boody. May cause low blood pressure, rapid heart beat and liver damage.

INHALATION: May cause mild irritation to the nose, throat and respiratory tract and may result in central nervous system (CNS) depression. Prolonged and repeated exposures to high concentrations may cause hearing loss. Chronic hydrocarbon abuse has been associated with irregular heart rhythms and potential cardiac arrest. Inhalation of vapors may cause respiratory irritation that may include a temporary burning sensation of the nose and throat, coughing, and /or difficulty breathing. If material enters lungs may cause coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and/or fever.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

ACUTE TOXICITY: Aspiration pneumonitis may be evidenced by coughing, choking, wheezing, labored breathing, chest congestion, shortness of breath and/or fever. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters. 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.

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.

TARGET ORGAN STATEMENT: The following organs and/or organ systems may be damaged by overexposure to this material. Heart, auditory system.

COMMENTS HEALTH: 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.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Naphtha (Petroleum, Heavy Alkylate	24 - 30	064741-65-7
Aromatic Petroleum Distillates	27 - 32	064742-95-6
1,2,4-trimethylbenzene	9.548 - 12.32	000095-63-6
Xylenes (o-,m-,p- isomers)	0.308 - 0.924	001330-20-7
Cumene	0.616 - 0.75	000098-82-8
2- Butoxyethanol	40 - 47	111-76-2

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention, if irritation occurs or persists.

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: Causes central nervous system depression. Dermatitis may result from prolonged or repeated exposure. Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal. Consult a Poison Control Center for guidance. Ingestion may cause coma, metabolic acidosis, and hemoglobinuria. If more than 2.0 mL/kg has been ingested, vomiting should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: (111°F) TAG CC. Lowest flash of chemical constituents within product.

FLAMMABLE LIMITS: 11% to 1%

AUTOIGNITION TEMPERATURE: (658°F) to (864°F)

EXTINGUISHING MEDIA: Use alcohol-resistant foam, water spray or fog. For small fires only, may use dry chemical powder, carbon dioxide, sand or earth. 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: Clear fire area of all non-emergency personnel. Do not enter fire space without proper protective gear, including eye protection and respiratory protection to prevent breathing products of combustion. Use water stream to cool exposed containers.

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

LARGE SPILL: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear appropriate personal protective equipment when responding to spills. Shut off source of leak if safe to do so. Dike and contain spill. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Flush area with water to remove trace residue. Contain run-off from residue flush and dispose of properly. Prevent runoff from entering drains, sewers, streams, basements or confined areas.

GENERAL PROCEDURES: Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Section 8 of the Material Safety Data Sheet (MSDS). For guidance on disposal of spilled material see Section 13 of this

MSDS. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapor or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas indicator.

RELEASE NOTES: US regulations require reporting spills of this material that could reach any surface waters. Report spills to local authorities and/or the the National Response Center at (800) 424-8802 as appropriate or required.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Glycol ethers can be peroxide formers. 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: Keep container tightly closed. Store in a diked, well-ventilated area, away from sunlight, ignition sources and other sources of heat. Must be kept inhibited during storage and shipment as material can polymerise. Vapors from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapor treatment system.

STORAGE TEMPERATURE: Ambient

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**
Aromatic Petroleum Distillates	**TWA**					50	
1,2,4-trimethylbenzene	**TWA**			25	123		
Xylenes (o-,m-,p- isomers)	**TWA**	100	435	100	434		
	STEL			150	651		
Cumene	**TWA**	50 [1]	245 [1]	50	246		
2- Butoxyethanol	**TWA**	50(S) [2]	240(S) [2]	20(S) [1]	121(S) [1]	NL	NL
	STEL	NL	NL	NL	NL	NL	NL
OSHA TABLE COMMENTS: **1**. S = Skin **2**. 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: Chemical splash goggles (chemical monogoggles).

SKIN: Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapors (boiling point greater than 65 degrees C (149 degrees F)). Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

PROTECTIVE CLOTHING: Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

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: Monitoring of the concentration of substances in the breathing zone of workers or in ether general workplace may be required to confirm compliance for adequacy of exposure controls. Examples of sources of recommended air monitoring methods are given below. Further national methods may be available. National Institute of Occupation Safety and Health (NIOSH), USA: Manual of Analytical Methods. Occupational Safety and Health Administration (OSHA), USA: Sampling and

Analytical Methods.

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

COLOR: Colorless, clear to light colored liquid.

pH: Essentially neutral.

VAPOR PRESSURE: Not Determined

VAPOR DENSITY: Heavier than air.

BOILING POINT: 148.89°C (300°F) to 195°C (383°F)

FLASHPOINT AND METHOD: (111°F) TAG CC. Lowest flash of chemical constituents within product.

SOLUBILITY IN WATER: Partially Soluble

EVAPORATION RATE: Less than 1 (n-Butyl Acetate = 1)

DENSITY: 7.08

SPECIFIC GRAVITY: 0.820 to 0.870

(VOC): 7.081 lbs./gal.
Notes: 848.59752 gms/liter

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions of use. Glycol ethers can be peroxide formers. Potential exists for runaway reaction at elevated temperatures in the presence of strong bases and salts of strong bases. Reacts with strong oxidizing agents.

CONDITIONS TO AVOID: Exposure to air. Avoid heat, sparks, open flames and other ignition sources.

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. May form explosive peroxides.

INCOMPATIBLE MATERIALS: Strong oxidizing agents, acids, strong bases, salts of strong bases, aluminium.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD_{50} (rat)	DERMAL LD_{50} (rabbit)	INHALATION LC_{50} (rat)
Naphtha (Petroleum, Heavy Alkylate	> 2000 MG/KG Rat	> 2000 mg/kg (rat)	> Near saturated vapour concentration / 1 hours, Rat
2- Butoxyethanol	> 500 to 2000 mg/kg (guinea pig)	> 2000	to 0 No deaths at highest tested does./1 hours, guinea pig.

EYE EFFECTS: Risk of serious damage to eyes. Effects did not fully reverse over duration of study.

SKIN EFFECTS: May cause moderate irritation to skin. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

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. Repeated Dose Toxicity for 2-Butoxyethanol: Blood: casues hemolysis of red blood cells and /or anaemia in animals, but not considered relevant for man.

CARCINOGENICITY

IARC: The International Agency for Research of Cancer (IARC) Carcinogenicity Classification for 2-Butoxyethanol is: IARC 3: Classification not possible from current data.

NTP: Solvent naphtha (petroleum), light aromatic is a complex stream of predominately C8 to C10 hydrocarbons; the exact composition and concentrations will vary. Contains naphthalene 0.3 .10% weight. The National Toxicology Program (NTP) has reported a chronic inhalation study in rats of naphthalene, a minor component of this product. Naphthalene caused severe inflammation and an increase in tumors of the nasal epithelium in both sexes. NTP considered this to be clear evidence of carcinogenic activity of naphthalene in rats. The relevance to the inhalation toxicity of this product in humans is unknown. US NTP inhalation studies for 2-Butoxyethanol found no evidence of cancer in rats. In mice, a small increase in tumors of the liver and the forestomach occurred, which are of uncertain relevance to man.

Notes: Carcinogencity Classification for 2-Butoxyethanol: ACGIH Group A3: Confirmed animal carcinogen with unknown relevance to humans.

REPEATED DOSE EFFECTS: 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.

REPRODUCTIVE EFFECTS: Reproductive and Developmental Toxicity: Animal testing with light aromatic solvents demonstrated embryo/fetal effects but not malformations at concentrations producing maternal toxicity. 2-Butoxyethanol 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.

GENERAL COMMENTS: Guinea pig toxicity data is considered more relevant than rat data for human responses.

COMMENTS: Respiratory Irritation for 2-Butoxyethanol: Inhalation of vapors or mists may cause irritation to the respiratory system.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Mobility: If product enters soil, it will be highly mobile and may contaminate groundwater.

ECOTOXICOLOGICAL INFORMATION: Acute Toxicity for 2-Butoxyethanol:
Fish: Low toxicity: LC/EC/IC50 greater than 1000 mg/l
Aquatic Invertebrates: Low toxicity: LC/EC/IC50 greater than 1000 mg/l
Algae: Low toxicity: LC/EC/IC50 greater than 100 mg/l
Microorganisms: Low toxicity: LC/EC/IC50 greater than 100 mg/l

AQUATIC TOXICITY (ACUTE): Acute Toxicity for Naphtha (Petroleum), Heavy Alkylate:
Fish: Low toxicity: LC/EC/IC50 greater than 1000 mg/l
Aquatic Invertebrates: Low toxicity: LC/EC/IC50 greater than 1000 mg/l
Algae: Low toxicity: LC/EC/IC50 greater than 1000 mg/l
Microorganisms: Low toxicity: LC/EC/IC50 greater than 1000 mg/l

CHEMICAL FATE INFORMATION: Persistence/degradability for 2-Butoxyethanol: Readily biodegradable meeting the 10 day window criterion. Oxidizes rapidly by photo-chemical reactions in air.

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: Federal, state and local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation procedure. Disposal requirements are dependent on the hazard classification and will vary by location and the type of disposal selected.

EMPTY CONTAINER: KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue and can be dangerous.

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: (Ethylene glycol monobutyl ether, petroleum naphtha)

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: UN 1993

PACKING GROUP: III

NAERG: 128

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, a fire hazard and reactive.

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

313 REPORTABLE INGREDIENTS: Xylenes (CAS 1330-20-7), Trimethylbenzene, 1,2,4,- (CAS 95-63-6), Cumene (CAS 98-82-8). 2-butoxyethanol and glycol ethers are listed.

302/304 EMERGENCY PLANNING

EMERGENCY PLAN: To the best of our knowledge, none of the chemicals in this product are listed as an extremely hazardous substance under Section 302 of SARA Title III nor does this product contain any other such substances.

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.

16. OTHER INFORMATION

PREPARED BY: COMPLIANCE DEPT.

REVISION SUMMARY: New MSDS

HMIS RATING

HEALTH:	**2**
FLAMMABILITY:	**2**
PHYSICAL HAZARD:	**0**
PERSONAL PROTECTION:	**H**

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