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## MATERIAL SAFETY DATA SHEET

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### 1. PRODUCT AND COMPANY IDENTIFICATION

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Product Name: **FastINK™ Textile WHITE PIGMENT INK**

Product Use: Ink-Jet Printing Ink

Company Identification

**MANUFACTURER/DISTRIBUTOR**

U.S. Graphic Arts, Inc. dba U.S. Screen Print & Inkjet Technology  
1901 E. 5<sup>th</sup> Street  
Tempe, Arizona 85281 USA

**PHONE NUMBERS**

Product, Safety, Health and Environmental Information 1-480-929-0640 MST 8:30am-5:00pm M-F USA  
Transport Emergency  
Medical Emergency CHEMTREC: 1-800-424-9300 (24 hours, USA)

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

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Components (% by weight)

Material	CAS Number	%
Water	7732-18-5	30-55
*Ethylene Glycol	107-21-1	20-30
Humectant	**	10-15
White Pigment	**	10-15
Polymer	**	5-10

\*Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Components (Remarks)

\*\*The specific identity for each component not identified by a CAS Registry Number is withheld as a trade secret.

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### 3. HAZARDS IDENTIFICATION

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#### Potential Health Effects

THIS PRODUCT CAN BE USED SAFELY WHEN USED AS DIRECTED AND WHEN APPLICABLE SAFETY PRECAUTIONS ARE FOLLOWED.

#### POTENTIAL HEALTH EFFECTS FROM PRODUCT

Potential routes of overexposure to this product are skin contact, eye contact and inhalation of vapor.

Ingestion is not expected to be a significant route of exposure for this product under normal use conditions.

There is no toxicity data available for this specific formulation. Any potential hazards are presumed to be due to exposure to the components.

#### ADDITIONAL HEALTH EFFECTS

Since this mixture has not been tested as a whole to determine the hazards by all routes of exposure, information is provided for each hazardous component of the mixture to meet requirements of OSHA's Hazard Communication Standard (29 CFR 1910.1200). The effects noted occur from exposure to the pure component unless otherwise noted.

#### INFORMATION FOR COMPONENTS

##### ETHYLENE GLYCOL

Eye Contact - May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Vapors or mists may cause eye irritation.

Skin Contact - Essentially nonirritating to skin. Repeated skin exposure to large quantities may result in absorption of harmful amounts.

Inhalation - At room temperature, exposure to vapors are minimal due to physical properties; higher temperatures may generate vapor levels sufficient to cause adverse effects.

Ingestion - Single dose oral toxicity is considered to be moderate. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death.

Systemic (Other Target Organ) Effects - Excessive exposure may cause irritation to upper respiratory tract. Observations in animals include kidney and liver effects and deposition of calcium salts in various tissues after long-term dietary intake of ethylene glycol.

Cancer Information - Ethylene glycol did not cause cancer in long-term animal studies.

Teratology (Birth Defects) - Based on animal studies, ingestion of very large amounts of ethylene glycol appears to be the major and possibly only route of exposure to produce birth defects. Exposures by inhalation (tested nose-only in animals to prevent ingestion) or skin contact, the primary routes of occupational exposure, had minimal or essentially no effect on the fetus.

Reproductive Effects - Ingestion of large amounts of ethylene glycol has been shown to interfere with reproduction in animals. Specifically, growth retardation and decreased litter size in rats and mice and mating frequency in mice were observed.

#### HUMECTANT

Eye Contact - May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

Skin Contact - Prolonged or repeated exposure not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts.

Inhalation - At room temperature, vapors are minimal due to physical properties. If heated or sprayed as an aerosol, airborne material may cause upper respiratory irritation.

Ingestion - Single dose oral toxicity is considered to be extremely low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amount larger than that may cause injury. Signs and symptoms of excessive exposure may be central nervous system effects and increased blood sugar levels.

Systemic (Other Target Organ) Effects - Repeated excessive exposure may cause increased fat levels in blood. Observations in animals include kidney, liver, and gastrointestinal effects with very large oral doses.

Cancer Information - Did not cause cancer in long-term animal studies.

Teratology - Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus.

Reproductive Effects - Reproductive effects seen in female animals are believed to be due to altered nutritional status resulting from extremely high doses in their diets. Similar effects have been seen in animals fed synthetic diets.

#### Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1 % are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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## 4. FIRST AID MEASURES

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### First Aid

#### INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

#### SKIN CONTACT

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Consult a physician. Wash contaminated clothing before reuse.

#### EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

#### INGESTION

Ingestion is not an expected route of exposure during normal use of the product. If ingested, consult a physician.

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## 5. FIRE FIGHTING MEASURES

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### Flammable Properties

Flash Point	: >93.3 C (>200 F)
Method	: Closed Cup
Approximate Flammable Limits in Air, % by Volume	
LEL	: 3.2
UEL	: 15.3
Autoignition Temperature	: 398 C Product

is a nonflammable water-based solution.

Hazardous combustion products (gases/vapors) produced in fire can include carbon monoxide, carbon dioxide and smoke.

### Extinguishing Media

Use media appropriate for surrounding material.

### Fire Fighting Instructions

This product is not flammable. Use normal firefighting procedures for the area.

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## 6. ACCIDENTAL RELEASE MEASURES

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### Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

### Initial Containment

Dike spill.

### Spill Clean Up

Soak up with absorbent material.

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## 7. HANDLING AND STORAGE

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### Handling (Personnel)

Avoid contact with eyes, skin, or clothing.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Personal Protective Equipment

#### EYE/FACE PROTECTION

Wear safety glasses. Wear coverall chemical splash goggles and face shield when the possibility exists for eye and face contact due to splashing or spraying of the material.

#### RESPIRATORS

Respirators are not needed for normal use.

#### PROTECTIVE CLOTHING

If there is potential for significant dermal contact wear appropriate impervious clothing and gloves.

### Applicable Exposure Limits and Exposure Data

WATER	
PEL (OSHA)	: None Established
TLV (ACGIH)	: None Established
AEL * (USSPIT)	: None Established
LD <sub>50</sub> (rat, oral)	: >90 mL/kg (RTECS) :
LC <sub>50</sub> (rat, inhalation/4 hr.)	No data available

ETHYLENE GLYCOL	
PEL (OSHA) TLV	: None Established
(ACGIH) AEL *	: Ceiling: 100 mg/m <sup>3</sup> , aerosol:
(USSPIT) IEL	50 ppm, 8 Hr. TWA, vapor: 52
(2000/39/EC)	mg/m <sup>3</sup> , 20 ppm, skin
	STEL 104 mg/m <sup>3</sup> , 40 ppm:
LD <sub>50</sub> (rat, oral)	4,700 mg/kg (RTECS)
LD <sub>50</sub> (rabbit, dermal) LC <sub>50</sub>	: 9,530 uL/kg (RTECS)
(rat, inhalation/4 hr.)	: >200 mg/m <sup>3</sup> (RTECS)
HUMECTANT	
PEL (OSHA)	: 5 mg/m <sup>3</sup> , 8 Hr. TWA (mist, respirable fraction)
	15 mg/m <sup>3</sup> , 8 Hr. TWA (mist, total dust) : 10
TLV (ACGIH)	mg/m <sup>3</sup> , 8 Hr. TWA (mist)
AEL * (USSPIT)	: None Established
LD <sub>50</sub> (rat, oral)	: >17,000 mg/kg (supplier)
LC <sub>50</sub> (rat, inhalation/4 hr.)	: >4.9 mg/liter (supplier)
WHITE PIGMENT	
PEL (OSHA)	: 15 mg/m <sup>3</sup> 8 Hr. TWA (total dust)
TLV (ACGIH)	: 10 mg/m <sup>3</sup> 8 Hr. TWA (total dust), A4:
AEL * (USSPIT)	10 mg/m <sup>3</sup> 8 Hr. TWA (total dust) :
LD <sub>50</sub> (rat, oral)	>24,000 mg/kg (supplier)
LC <sub>50</sub> (rat, inhalation/4 hr.)	: >10,000 mg/kg (supplier)
POLYMER	
PEL (OSHA)	: None Established :
TLV (ACGIH)	None Established :
AEL * (USSPIT)	None Established :
LD <sub>50</sub> (rat, oral)	No data available :
LC <sub>50</sub> (rat, inhalation/4 hr.)	No data available

\* AEL is U. S. Screen Print & Inkjet Technology (USSPIT) Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Physical Data

Form	: Liquid
Color	: White
Odor	: Slight
Solubility in Water	: Miscible
pH	: About 7-8
Specific Gravity	: About 1.1

Other Information

Flash Point : >93.3 C (>200 F)  
Method : Closed Cup  
Approximate Flammable Limits in Air, % by Volume  
LEL : 3.2  
UEL : 15.3  
Autoignition Temperature : 398 C

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**10. STABILITY AND REACTIVITY**

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Chemical Stability

Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials

None reasonably foreseeable.

Decomposition

Decomposition does not occur during normal use.

Polymerization

Polymerization will not occur.

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**11. TOXICOLOGICAL INFORMATION**

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Animal Data

No data available for product.

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**12. ECOLOGICAL INFORMATION**

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Ecotoxicological Information

No data available for product.

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### 13. DISPOSAL CONSIDERATIONS

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#### Waste Disposal

DO NOT DISCARD INTO ANY SEWERS, INTO ANY BODY OF WATER, OR ON THE GROUND. Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local laws and regulations.

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### 14. TRANSPORTATION INFORMATION

(Not meant to be all inclusive)

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DOT (Domestic Surface, U.S.A.)	: Not regulated
ICAO/IATA (Air)	: Not regulated
IMO/IMDG (Ocean)	: Not regulated

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### 15. REGULATORY INFORMATION

(Not meant to be all inclusive - selected regulations represented)

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#### U.S. Regulations

##### Federal Regulations

TSCA Inventory Status - All components of this product are listed, or exempt from listing, on the TSCA 8(b) chemical inventory.

##### State Regulations

###### State Right-To-Know

WARNING - SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM (California Proposition 65)

None

**European Union Regulations**

EU Inventory Status - All components of this product are listed, or are exempt from listing, on the EINECS chemical inventory.

Transport Information - This product is not classified as dangerous within the meaning of transport regulations.

Labeling - EC-Directive 1999/45/EC

Preliminary assessment

Symbol and classification

Xn Harmful

R-Phrases

R22 Harmful if swallowed

**Switzerland**

Switzerland VOC Regulations (Ordinance 814.018, *Verordnung über die Lenkungsabgabe auf flüchtigen organischen Verbindungen*, as of 28 December 2000)

This product is exempt from Swiss VOC regulations.

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**16. OTHER INFORMATION**

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HMIS® Rating

Health  
Flammability  
Reactivity

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process

MSDS Contact Information

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Revision History

October 1, 2005      New MSDS

Key ACG I H	American Conference of Governmental Industrial Hygienists
AEL	Acceptable Exposure Limit (USSPIT)
Cmpds	Compounds
DOT	Department of Transportation (U.S.A.)
ET EU	Eastern Time (U.S.A.)
HMIS®	European Union
IARC	Hazardous Material Information System (National Paint and Coatings Association)
IATA	International Agency for Research on Cancer
ICAO	International Air Transport Association
IEL	International Civil Aviation Organization
IMDG	Indicative Exposure Limit (EU Directive 2000/39/EC)
IMO	International Maritime Dangerous Goods
LEL or LFL	International Maritime Organization
M-F	Lower Explosive Limit or Lower Flammable Limit
NA	Monday through Friday
NIOSH	North America
NOHSC	National Institute of Occupational Safety and Health (U.S.A.)
NOS	National Occupational Health and Safety Commission (Worksafe Australia)
NTP	Not Otherwise Specified
OEL	National Toxicology Program (U.S.A.)
OSHA	Occupational Exposure Limit
PEL	Occupational Safety and Health Administration (U.S.A.)
RTECS	Permissible Exposure Limit
STEL	Registry of Toxic Effects of Chemical Substances (NIOSH)
TLV	Short Term Exposure Limit
TSCA	Threshold Limit Value
TWA	Toxic Substances Control Act (U.S.A)
UEL or UFL	Time-weighted Average
U.S.A.	Upper Explosive Limit or Upper Flammable Limit
VOC	United States of America
WEEL	Volatile Organic Compound(s)
	Workplace Environmental Exposure Level

End of MSDS