

# MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

## PART I *What is the material and what do I need to know in an emergency?*

### 1. PRODUCT IDENTIFICATION

**TRADE NAME (AS LABELED):** 4500 Green

**SYNONYM/CHEMICAL CLASS:** Solution of dyes

**PRODUCT USE:** Ink Jet Printing Ink

**MANUFACTURER'S NAME:** Digital Design Inc.  
**ADDRESS:** 67 Sand Park Road  
Cedar Grove NJ 07009

**EMERGENCY PHONE:** 1-800-255-3924 (CHEM-TEL)

**BUSINESS PHONE:** 1-973-857-9500

**DATE OF PREPARATION:** March 9, 2009

HMIS Codes	
HEALTH (BLUE)	1
FLAMMABILITY (RED)	0
REACTIVITY (YELLOW)	0

### 2. COMPOSITION, INFORMATION ON HAZARDOUS INGREDIENTS

CHEMICAL FAMILY	CAS #	% w/w	EXPOSURE LIMITS IN AIR (ppm)					OTHER
			ACGIH		OSHA			
			TLV	STEL	PEL	STEL	IDLH	
Lactam	872-50-4	5 N/L		N/L	N/L	N/L	N/L	100

N/L = Not Listed

### 3. HAZARD IDENTIFICATION

**EMERGENCY OVERVIEW:** This material presents mild health hazards when used in the prescribed manner.

#### POTENTIAL HEALTH EFFECTS FROM ACUTE AND CHRONIC EXPOSURE

**Inhalation:** This product produces a low odor and should not cause any respiratory problems when used in the prescribed manner.

**Contact with Skin or Eyes:** Due to the colorant components, skin contact will cause discoloration of the skin and may be removed by washing. Contact with the eyes will cause irritation.

**Ingestion:** Ingestion of this material may stain the mouth and esophagus and may cause irritation of the upper gastrointestinal tract, which can cause difficulty in swallowing. Minute amounts aspirated into the lungs during ingestion or vomiting may cause pulmonary injury.

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## **PART II**    *What do I do if a hazardous situation occurs?*

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### 4. FIRST-AID MEASURES

**Inhalation:** Remove victim to fresh air, and get medical aid immediately. If breathing has ceased, apply artificial respiration with oxygen and a suitable mechanical device such as a bag and a mask. Do NOT use mouth-to-mouth resuscitation.

**Eyes:** Flush eyes with plenty of water for at least 15 minutes. Get medical aid as a precautionary measure. Do NOT allow victim to rub or keep eyes closed.

**Skin:** If spilled on skin or eyes, immediately wash it off with running water. Remove contaminated clothing, taking care not to contaminate the eyes. Victims must seek immediate medical attention if any symptoms of irritation develop

**Ingestion:** If chemical is swallowed, seek medical attention. If professional advice is not available and victim is conscious and alert, give two to four cups of milk or water. Do not induce vomiting.

Victims of chemical exposure should be taken for medical attention if symptoms of exposure develop. Take copy of label and MSDS to physician or health professional with victim.

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### 5. FIRE-FIGHTING MEASURES

FLASHPOINT C (method):    > 100 °C (Seta flash, closed-cup)

AUTO-IGNITION TEMPERATURE:    >200 °C

**FIRE EXTINGUISHER MATERIALS AND METHODS:**

Carbon Dioxide: OK

Water Spray: OK

Alcohol Foam: OK

Dry Chemical: OK

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear a self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** When subjected to prolonged high temperatures or burning, this product will emit fumes containing carbon monoxide and carbon dioxide. Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

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### 6. ACCIDENTAL RELEASE MEASURES

**SPILL AND LEAK RESPONSE:** For incidental spills, use professional equipment such as rubber gloves and rubber apron, splash goggles or safety glasses. Trained personnel that use pre-planned procedures should respond to uncontrolled or large releases. Proper protective equipment should be used. In case of any spill, clear the affected area, protect people, and respond with trained personnel. Respiratory protection should be used to protect against potentially irritating contaminated dust.

Absorb spilled liquid with polypads or other appropriate materials. Avoid splashing or spraying liquid. Clean area thoroughly by rinsing with water. It may not be possible to decolorize stains. Place all spill residues in a double plastic bag, in appropriate sealed container. Dispose of in accordance with Federal, State, and local waste disposal regulations.

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### **PART III** *How can I prevent hazardous situations from occurring?*

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#### 7. HANDLING AND STORAGE

~~WORK PRACTICES AND HYGENE PRACTICES:~~ Avoid getting chemicals ON YOU or IN YOU. Wash hands after handling chemicals. Do not eat or drink while handling chemicals. Avoid breathing mists of this ink.

~~STORAGE AND HANDLING PRACTICES:~~ Store product in properly labeled, closed, containers in cool location. Avoid oxidizing and reducing agents and alkalies.

~~PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:~~ Follow practices indicated in Section 6 (Accident Release Measures). Make certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Clean equipment with appropriate flushing solution before maintenance begins. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

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#### 8. EXPOSURE CONTROLS – PERSONAL PROTECTION

~~VENTILATION AND ENGINEERING CONTROLS:~~ Use with adequate ventilation. Use a mechanical fan or vent area to outside.

~~RESPIRATORY PROTECTION:~~ None required under routine conditions of use. It is advisable to use respiratory protection during the release response procedures.

~~EYE PROTECTION:~~ Splash goggles or safety glasses.

~~HAND PROTECTION:~~ Use of butyl gloves is recommended. Check gloves for leaks. Wash hands after removing gloves.

~~BODY PROTECTION:~~ Use body protection appropriate for task. Cover-alls, rubber aprons, or chemical protective clothing made from natural rubber are generally acceptable, depending upon the task.

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#### 9. MATERIAL CHARACTERISTICS

PHYSICAL STATE:	Liquid	% VOLITILE (by weight):	> 75 %
SPECIFIC GRAVITY:	1.0 – 1.1	pH:	7 - 9
WATER SOLUBILITY:	Miscible	BOILING POINT:	> 90 °C

~~APPEARANCE, ODOR AND COLOR:~~ This ink is a green liquid and has a mild odor.

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## 10. STABILITY AND REACTIVITY

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Extreme heat may cause material to decompose, producing acrid smoke and hazardous byproducts of carbon monoxide and carbon dioxide.

**HAZARDOUS POLYMERIZATION:** Will not occur.

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## **PART IV** *Is there any other useful information about this material?*

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## 11. TOXICOLOGICAL INFORMATION

**CARCINOGENITY:** This product's ingredients are not found on the following lists: FEDERAL OSHA 2 LIST, NTP, IARC, CAL/OSHA.

**REPRODUCTIVE EFFECTS:** Listed below are the potential reproductive effects that may occur after exposure to this product:

Based on the individual components in this product, it is ~~not~~ expected to be a mutagen, reproductive toxin, or developmental toxin.

**TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms. No specific medical procedures are available.

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## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL STABILITY:** All work practices should be aimed at eliminating environmental contamination. There are no reported adverse environmental effects due to exposure to this product.

**EFFECT OF MATERIAL ON PLANTS OR ANIMALS:** While no plant or animal studies have been performed with this material, listed below are the ~~components~~ of this ink that have shown adverse effects on plants and/or animals:

None known.

**EFFECT OF MATERIAL ON AQUATIC LIFE:** There are no reported adverse effects on aquatic life due to exposure to this product. It is expected that this material will float near the surface of water and dissipate in a time-frame dependent upon the magnitude of the release and the movement of the water. Listed below are the ~~components~~ of this ink that have shown adverse effects on aquatic life:

None known.

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### 13. DISPOSAL CONSIDERATIONS

**PREPARING WASTES FOR DISPOSAL:** Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This chemical, if unaltered by handling, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Discharge into a sanitary sewer or storm drain may violate local ordinance.

**EPA WASTE NUMBER:** Not Applicable.

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### 14. REGULATORY INFORMATION

**TRANSPORTATION INFORMATION:** This material is not subject to the U.S. Department of Transportation regulations nor is it classified as hazardous under IATA regulations.

**TSCA INVENTORY STATUS:** The chemicals in this compound ARE listed on the TSCA Inventory.

**SARA Title III – Section 313, Emissions Reporting:** This ink contains N-methyl-2-pyrrolidone (CAS # 872-50-4).

**MARINE POLLUTANT:** This product contains no chemicals which have been designated by the Department of Transportation to be Marine Pollutants in 49 CFR 172.101, Appendix B.

**CALIFORNIA PROPOSITION 65:** Proposition 65 requires manufacturers or distributors of consumer products into the State of California to provide a warning statement if the product contains ingredients for which the state has found to cause cancer, birth defects, or other reproductive harm. This ink contains N-methyl-2-pyrrolidone (CAS # 872-50-4).

**CERCLA REPORTABLE QUANTITIES (RO):** Not Applicable.

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### 15. OTHER INFORMATION

**PREPARED BY:** Digital Design Inc.  
67 Sand Park Road  
Cedar Grove NJ 07009

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all other sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.