

Issuing Date 18-Mar-2015

Revision date 18-Mar-2015

Revision Number 1

**1. Identification of the Substance/Preparation and of the Company/Undertaking**

**Product identifier**

**Product name** 4600BK

**Other means of identification**

**Product Code(s)** 4600BK

**Synonyms** No information available

**Recommended use of the chemical and restrictions on use**

**Recommended Use** ink.

**Uses advised against** No information available

**Details of the supplier of the safety data sheet**

**Manufacturer:**

Digital Design Inc.  
67 Sand Park Rd.  
Cedar Grove NJ 07009  
PH: (973) 857-9500

**Emergency telephone number** Chemtel 1-800-255-3924 (Domestic)  
01-813-248-0585 (International)

**2. Hazards Identification**

**Classification**

**OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Reproductive Toxicity	Category 1B
Flammable Liquids	Category 4

**Label elements**

**EMERGENCY OVERVIEW**

**DANGER**

**Hazard statements**

May damage fertility or the unborn child  
combustible liquid



**Appearance** black

**Physical state** liquid

**Odor** slight amine

**Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Keep away from heat/sparks/open flames/hot surfaces. — No smoking

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Precautionary Statements - Storage**

Store locked up  
 Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****OTHER INFORMATION**

- MAY BE HARMFUL IF SWALLOWED
- Harmful to aquatic life with long lasting effects
- Harmful to aquatic life

Unknown acute toxicity 4.59462% of the mixture consists of ingredient(s) of unknown toxicity

### 3. Composition/information on Ingredients

Chemical name	CAS-No	Weight %	Trade secret
Lactam	Proprietary	15 - 40	*
Modified Carbon Black	NOT ASSIGNED	1 - 5	*
Ethyl alcohol	64-17-5	1 - 5	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**NOTE**

Remaining components are either not hazardous or below threshold limits.

### 4. First aid measures

**FIRST AID MEASURES****General advice**

Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. If symptoms persist, call a physician. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Eye contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**IF ON SKIN**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary. Immediate medical attention is not required. If skin irritation persists, call a physician.

**Inhalation**

If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Remove to fresh air. Consult a physician. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.

**Ingestion**

Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician.

**Self-protection of the first aider**

Use personal protective equipment as required.

**Most important symptoms and effects, both acute and delayed**

**Most Important Symptoms and Effects** Hives.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

## 5. Fire-fighting measures

**Suitable extinguishing media**

Use Carbon dioxide (CO<sub>2</sub>) Dry chemical Alcohol resistant foam

**Unsuitable extinguishing media** None.

**Specific hazards arising from the chemical**

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective equipment and precautions for firefighters**

Wear self-contained breathing apparatus and protective suit.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Use personal protection recommended in Section 8. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental precautions**

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

**Methods and material for containment and cleaning up**

**Methods for containment** Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers. Soak up with inert absorbent material. Dam up.

## 7. Handling and Storage

**Precautions for safe handling**

**Handling** Use personal protective equipment as required. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

**Incompatible Products** Strong oxidizing agents.

## 8. Exposure Controls/Personal Protection

### Control parameters

### Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl alcohol 64-17-5	1000 ppm STEL	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>

NIOSH IDLH: Immediately Dangerous to Life or Health

### Appropriate engineering controls

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations.

### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Tight sealing safety goggles. Face protection shield.

**Skin and body protection** For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

**Respiratory protection** None under normal use conditions.

**Hygiene Measures** Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Regular cleaning of equipment, work area and clothing is recommended.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	slight amine
<b>Appearance</b>	black	<b>Odor Threshold</b>	No information available
<b>color</b>	No information available		
<b>Property</b>	<b>Values</b>	<b>Remarks/ • Method</b>	
<b>pH</b>	8 - 10		
<b>Melting point / freezing point</b>	No information available		
<b>Boiling point / boiling range</b>	> 89 °C	Seta closed cup	
<b>Flash Point</b>	No information available		
<b>Evaporation Rate</b>	No information available		
<b>flammability (solid, gas)</b>	No information available		
<b>Flammability Limit in Air</b>			
<b>Upper Flammability Limit</b>	No information available		
<b>Lower Flammability Limit</b>	No information available		
<b>Vapor Pressure</b>	No information available		
<b>Vapor Density</b>	No information available		
<b>Specific gravity</b>	0.9 - 1.1	None known	
<b>Water solubility</b>	Practically insoluble (~0.4 ug/mL)		
<b>Solubility in other solvents</b>	No information available		
<b>Partition coefficient: n-octanol/water</b>	No information available		
<b>Autoignition temperature</b>	>200 °C		
<b>Decomposition temperature</b>	No information available		
<b>Kinematic viscosity</b>	No information available		
<b>Dynamic viscosity</b>	No information available		
<b>Explosive properties</b>	No information available		
<b>Oxidizing properties</b>	No information available		

### OTHER INFORMATION

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available

## 10. Stability and Reactivity

### Reactivity

No data available

### Chemical stability

Stable under normal conditions.

### Possibility of hazardous reactions

None under normal processing.

**Hazardous polymerization** Hazardous polymerization does not occur.

### Conditions to avoid

Extremes of temperature and direct sunlight.

### Incompatible materials

Strong oxidizing agents.

### Hazardous decomposition products

Carbon oxides.

## 11. Toxicological Information

### Information on likely routes of exposure

<b>Product Information</b>	The product has not been tested
<b>Inhalation</b>	May cause irritation of respiratory tract. Avoid breathing vapors or mists.
<b>Eye contact</b>	Irritating to eyes. Avoid contact with eyes.
<b>IF ON SKIN</b>	May cause skin irritation and/or dermatitis. Avoid contact with skin.
<b>Ingestion</b>	HARMFUL IF SWALLOWED. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Do NOT taste or swallow.

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Lactam	= 1350 mg/kg ( Rat )	-	-
Modified Carbon Black NOT ASSIGNED	greater than 2000 mg/kg	greater than 2000 mg/kg	-
Ethyl alcohol 64-17-5	= 7060 mg/kg ( Rat )	-	= 124.7 mg/L ( Rat ) 4 h

### Information on toxicological effects

**Symptoms** No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>irritation</b>	Irritating to eyes. May cause irritation to the skin and respiratory system.
<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	No information available.
<b>Carcinogenicity</b>	This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B). This product contains carbon black which is classified as a possible carcinogen when present as respirable dust. This is not relevant for this product since it is not in a respirable form. This product contains Ethanol which is classified as a possible carcinogen when ingested in the form of an alcoholic beverage. This is

irrelevant as this product is used for ink jet ink applications not an alcoholic beverage. The list below indicates any ingredient listed as a carcinogen:

Chemical name	ACGIH	IARC	NTP	OSHA
Ethyl alcohol 64-17-5	-	Group 1	Known	X

**IARC: (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

**NTP: (National Toxicity Program)**

Known - Known Carcinogen

**Reproductive toxicity**

May cause harm to the unborn child. Possible risk of harm to the unborn child. Possible risk of impaired fertility.

**STOT - single exposure**

No information available.

**STOT - repeated exposure**

No information available.

**Chronic toxicity**

Avoid repeated exposure. Contains a known or suspected reproductive toxin.

**Target organ effects**

Respiratory System, EYES, skin, Gastrointestinal tract (GI), blood, Central Nervous System (CNS), liver, Reproductive System.

**Aspiration hazard**

No information available.

**Numerical measures of toxicity - Product Information**

**Unknown acute toxicity**

4.59462% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

**ATEmix (oral)**

4155 mg/kg

**ATEmix (dermal)**

208333 mg/kg

**ATEmix (inhalation-dust/mist)**

322.2 mg/l

## 12. Ecological Information

**ecotoxicity**

34.5950176% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Ethyl alcohol 64-17-5	-	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static

**Persistence and degradability**

No information available.

**Bioaccumulation/Accumulation**

No information available.

Chemical name	Log Pow
Ethyl alcohol 64-17-5	-0.32

**Other adverse effects**

No information available

## 13. Disposal Considerations

**Waste treatment methods**

**Waste treatment methods**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging**

Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Ethyl alcohol 64-17-5	Toxic; Ignitable

#### 14. Transport Information

DOT Not regulated

IATA Not regulated

#### 15. Regulatory information

##### International Inventories

Chemical name	TSCA	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	AICS
Lactam	X	X	X	X	X	-	X	-
Modified Carbon Black NOT ASSIGNED	-	X	X	X	X	X	X	X
Ethyl alcohol 64-17-5	X	X	X	X	X	X	X	X

##### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

##### U.S. Federal Regulations

###### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

###### **SARA 311/312 Hazard Categories**

Acute health hazard	Category 1
Chronic Health Hazard	No
Fire hazard	Category 1
Sudden release of pressure hazard	No
Reactive Hazard	No

###### **Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

###### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive

Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

### U.S. State Regulations

#### California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Prop. 65
Ethyl alcohol - 64-17-5	Carcinogen Developmental

### U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ethyl alcohol 64-17-5	X	X	X

### U.S. EPA Label Information

EPA Pesticide registration number Not applicable

### 16. Other information

<u>NFPA</u>	Health hazard 2	flammability 2	Instability 0	Physical and chemical properties -
<u>HMIS</u>	Health hazard 2	flammability 2	Physical hazards 0	Personal precautions X

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#### Revision note

No information available

#### Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of Safety Data Sheet**