

**digital design****SAFETY DATA SHEET  
4700BK****1. Identification****Product identifier****Product name** 4700BK**Recommended use of the chemical and restrictions on use****Application** Printing ink.**Uses advised against** Use only for intended applications.**Details of the supplier of the safety data sheet****Supplier** Digital Design  
A Matthews International Company  
67 Sand Park Rd  
Cedar Grove, NJ 07009  
973-957-9500  
800-967-7746**Emergency telephone number****Emergency telephone** ChemTel Inc. 800-255-3924  
Worldwide Intl. 813-248-0585**2. Hazard(s) identification****Classification of the substance or mixture****OSHA Regulatory Status** This Product is Hazardous under the OSHA Hazard Communication Standard.**Physical hazards** Flam. Liq. 2 - H225**Health hazards** Not Classified**Environmental hazards** Aquatic Chronic 3 - H412**Label elements****Pictogram****Signal word** Danger**Hazard statements** H225 Highly flammable liquid and vapor.  
H412 Harmful to aquatic life with long lasting effects.

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<b>Precautionary statements</b>	<p>P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.</p> <p>P403+P235 Store in a well-ventilated place. Keep cool.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
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### 3. Composition/information on ingredients

#### Mixtures

<b>Ethanol</b>	<b>80-&lt;90%</b>
CAS number: 64-17-5	
<b>Classification</b>	
Flam. Liq. 2 - H225 Eye Irrit. 2A - H319	
<b>Chromium Complex Azo Dye Mixture</b>	<b>1-&lt;5%</b>
CAS number: Proprietary	
<b>Classification</b>	
Aquatic Chronic 2 - H411	
<b>Isopropanol</b>	<b>1-&lt;5%</b>
CAS number: 67-63-0	
<b>Classification</b>	
Flam. Liq. 2 - H225 Eye Irrit. 2A - H319 STOT SE 3 - H336	

The full text for all hazard statements is displayed in Section 16.

### 4. First-aid measures

#### Description of first aid measures

<b>General information</b>	Consult a physician for specific advice. If medical advice is needed, have product container or label at hand. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention immediately.
<b>Ingestion</b>	Get medical attention immediately. Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person.
<b>Skin Contact</b>	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Wash clothing and clean shoes thoroughly before reuse.
<b>Eye contact</b>	Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.

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**Protection of first aiders** First aid personnel should wear appropriate protective equipment during any rescue.

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

<b>General information</b>	The product is considered to be a low hazard under normal conditions of use. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. See Section 11 for additional information on health hazards.
<b>Inhalation</b>	May be harmful if inhaled. Vapor may affect central nervous system. Vapours may cause drowsiness and dizziness. Vapors irritate the respiratory system.
<b>Ingestion</b>	Harmful if swallowed. May cause nausea, headache, dizziness and intoxication.
<b>Skin contact</b>	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
<b>Eye contact</b>	This product is moderately irritating. Symptoms following overexposure to vapor may include the following: Severe irritation, burning, tearing and blurred vision.

### Indication of immediate medical attention and special treatment needed

**Notes for the doctor** Treat symptomatically.

## 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

**Unsuitable extinguishing media** Water spray.

### Special hazards arising from the substance or mixture

**Flammability Class** 7.1 Flammable Liquid IB.

**Specific hazards** Flammable liquid and vapour. Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO).

### Advice for firefighters

**Protective actions during firefighting** Evacuate area. Stop leak if safe to do so. Use water to keep fire exposed containers cool and disperse vapors. Use water spray to reduce vapors.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapors. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place.

### Environmental precautions

**Environmental precautions** Avoid release to the environment. Do not discharge into drains or watercourses or onto the ground. Use appropriate containment to avoid environmental contamination. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

### Methods and material for containment and cleaning up

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<b>Methods for cleaning up</b>	Eliminate all sources of ignition. Stop leak if safe to do so. Do not touch or walk into spilled material. Take care as floors and other surfaces may become slippery. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
<b>Reference to other sections</b>	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### 7. Handling and storage

#### Precautions for safe handling

<b>Usage precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet.
<b>Advice on general occupational hygiene</b>	Do not eat, drink or smoke when using this product. Provide eyewash station and safety shower. Good personal hygiene procedures should be implemented. Wash skin thoroughly after handling. Wash contaminated clothing before reuse.

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

<b>Storage precautions</b>	Store at temperatures between 4.4°C/40°F and 32.2°C/90°F. Keep only in the original container in a cool, well-ventilated place. Protect from freezing and direct sunlight. Container must be kept tightly closed when not in use. Keep containers upright. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in accordance with national regulations.
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#### Specific end uses(s)

<b>Specific end use(s)</b>	The identified uses for this product are detailed in Section 1.
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### 8. Exposure Controls/personal protection

#### Control parameters

#### Occupational exposure limits

##### **Ethanol**

Long-term exposure limit (8-hour TWA): OSHA 1000 ppm 1900 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): ACGIH 1000 ppm 1880 mg/m<sup>3</sup>

##### **Isopropanol**

Long-term exposure limit (8-hour TWA): OSHA 400 ppm 980 mg/m<sup>3</sup>

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 492 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): ACGIH 400 ppm 984 mg/m<sup>3</sup>

A4

OSHA = Occupational Safety and Health Administration.

ACGIH = American Conference of Governmental Industrial Hygienists.

A4 = Not Classifiable as a Human Carcinogen.

<b>Ingredient comments</b>	Data based on literature. Product not tested.
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#### Isopropanol (CAS: 67-63-0)

**Immediate danger to life and health** 2000 ppm

#### Exposure controls

**4700BK****Protective equipment****Appropriate engineering controls**

As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist. Use explosion-proof ventilating equipment.

**Eye/face protection**

Wear tight-fitting, chemical splash goggles or face shield.

**Hand protection**

It is recommended that chemical-resistant, impervious gloves are worn. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. It is recommended that gloves are made of the following material: Butyl rubber. Nitrile rubber. Rubber (natural, latex). Frequent changes are recommended.

**Other skin and body protection**

Avoid contact with skin. Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Hygiene measures**

Wash contaminated skin thoroughly after handling. Provide eyewash station and safety shower.

**Respiratory protection**

If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Organic vapor filter.

**Thermal hazards**

If there is a risk of contact with hot product, all protective equipment worn should be suitable for use with high temperatures.

**Environmental exposure controls**

Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

**9. Physical and Chemical Properties****Information on basic physical and chemical properties**

<b>Appearance</b>	Colored liquid.
<b>Color</b>	Black.
<b>Odor</b>	Alcoholic.
<b>Melting point</b>	-89°C/-128°F
<b>Initial boiling point and range</b>	63°C/147°F @ 760 mm Hg
<b>Flash point</b>	4°C/40°F CC (Closed cup).
<b>Evaporation rate</b>	8.3 (diethyl ether = 1)
<b>Upper/lower flammability or explosive limits</b>	Upper flammable/explosive limit: 19 % vol Lower flammable/explosive limit: 1.4 % vol
<b>Vapor pressure</b>	42.9 mm Hg @ 20°C/68°F
<b>Vapor density</b>	1.5
<b>Relative density</b>	0.80-0.90 g/cc
<b>Solubility(ies)</b>	Soluble in the following materials: Alcohols. Soluble in water.
<b>Partition coefficient</b>	log Pow: -0.3
<b>Auto-ignition temperature</b>	398°C/750°F

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<b>Decomposition Temperature</b>	Not applicable.
<b>Explosive properties</b>	Not applicable.
<b>Oxidizing properties</b>	Not applicable.
<b>Comments</b>	Information given is applicable to the product as supplied. Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

**10. Stability and reactivity**

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
<b>Possibility of hazardous reactions</b>	The following materials may react with the product: Strong oxidizing agents.
<b>Conditions to avoid</b>	Avoid the following conditions: Heat, sparks, flames.
<b>Materials to avoid</b>	Avoid contact with the following materials: Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Heating may generate the following products: Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO).

**11. Toxicological information****Information on toxicological effects****Specific target organ toxicity - single exposure**

**Target organs** Eyes Gastro-intestinal tract Respiratory system, lungs Skin

**Specific target organ toxicity - repeated exposure**

**Target organs** Blood Central nervous system Gastro-intestinal tract Kidneys Liver Skin

**Aspiration hazard**

**Aspiration hazard** Not relevant.

**Toxicological information on ingredients.****Ethanol****Acute toxicity - oral**

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 3,450.0

**Species** Rat

**ATE oral (mg/kg)** 3,450.0

**Acute toxicity - dermal**

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 15,800.0

**Species** Rabbit

**ATE dermal (mg/kg)** 15,800.0

**Acute toxicity - inhalation**

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**Acute toxicity inhalation** 30,000.0  
(LC<sub>50</sub> vapours mg/l)

**Species** Rat

**ATE inhalation (vapours** 30,000.0  
**mg/l)**

**Serious eye damage/irritation**

**Serious eye** Causes eye irritation.  
**damage/irritation**

**Carcinogenicity**

**Carcinogenicity** Ethyl alcohol is only considered a carcinogenic and developmental hazard when ingested as an alcoholic beverage.

**IARC carcinogenicity** IARC Group 1 Carcinogenic to humans.

**NTP carcinogenicity** Known carcinogen.

**OSHA Carcinogenicity** Listed as a carcinogen under OSHA

**Isopropanol****Acute toxicity - oral**

**Acute toxicity oral (LD<sub>50</sub>** 5,045.0  
**mg/kg)**

**Species** Rat

**ATE oral (mg/kg)** 5,045.0

**Acute toxicity - dermal**

**Acute toxicity dermal (LD<sub>50</sub>** 12,800.0  
**mg/kg)**

**Species** Rabbit

**ATE dermal (mg/kg)** 12,800.0

**Acute toxicity - inhalation**

**Acute toxicity inhalation** 73.0  
**(LC<sub>50</sub> vapours mg/l)**

**Species** Rat

**ATE inhalation (vapours** 73.0  
**mg/l)**

**Serious eye damage/irritation**

**Serious eye** Causes serious eye irritation.  
**damage/irritation**

**12. Ecological Information****Ecological information on ingredients.****Ethanol**

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 14,200 mg/l, Pimephales promelas (Fat-head Minnow)

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<b>Acute toxicity - aquatic invertebrates</b>	NOEC, 9 days: 9.6 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: 275 mg/l, Freshwater algae

**Isopropanol**

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: 9640 mg/l, Pimephales promelas (Fat-head Minnow)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 24 hours: 5102 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 72 hours: > 2000 mg/l, Desmodesmus subspicatus EC <sub>50</sub> , 24 hours: > 1000 mg/l, Algae

**Persistence and degradability****Ecological information on ingredients.****Isopropanol**

<b>Persistence and degradability</b>	The product is readily biodegradable.
<b>Biological oxygen demand</b>	1.19 g O <sub>2</sub> /g substance
<b>Chemical oxygen demand</b>	2.23 g O <sub>2</sub> /g substance

**Bioaccumulative potential**

<b>Partition coefficient</b>	log Pow: -0.3
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**Ecological information on ingredients.****Ethanol**

<b>Partition coefficient</b>	log Pow: -0.32
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**Isopropanol**

<b>Partition coefficient</b>	log Pow: 0.05
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**13. Disposal considerations****Waste treatment methods****General information**

The generation of waste should be minimized or avoided wherever possible. When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Dispose of waste product or used containers in accordance with local regulations. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

**Disposal methods**

Dispose of contents/container in accordance with national regulations. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. When handling waste, the safety precautions applying to handling of the product should be considered.

**14. Transport information**



**4700BK****UN Number**

UN No. (TDG)	1210
UN No. (IMDG)	1210
UN No. (ICAO)	1210
UN No. (DOT)	1210

**UN proper shipping name**

Proper shipping name (TDG)	PRINTING INK
Proper shipping name (IMDG)	PRINTING INK
Proper shipping name (ICAO)	PRINTING INK
Proper shipping name (DOT)	PRINTING INK

**Transport hazard class(es)**

TDG class	3
TDG label(s)	3
IMDG Class	3
ICAO class/division	3

**Transport labels****Packing group**

TDG Packing Group	II
IMDG packing group	II
ICAO packing group	II
DOT packing group	II

**Environmental hazards****Environmentally Hazardous Substance**

No.

**Special precautions for user**

EmS	F-E, S-D
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**15. Regulatory information**

Regulatory Status	Hazardous Chemical
Regulatory References	OSHA Hazard Communication Standard, 29 CFR 1910.1200

**US Federal Regulations****SARA 313 Emission Reporting***Isopropanol***SARA (311/312) Hazard Categories**

## 4700BK

*Ethanol*

Acute  
Chronic  
Fire

*Isopropanol*

Acute  
Chronic  
Fire

### US State Regulations

#### **California Proposition 65 Carcinogens and Reproductive Toxins**

*Ethanol*

Known to the State of California to cause cancer and developmental reproductive toxicity.

#### **California Air Toxics "Hot Spots" (A-I)**

*Isopropanol*

#### **California Directors List of Hazardous Substances**

The following ingredients are listed or exempt:

*Ethanol*

*Isopropanol*

#### **Massachusetts "Right To Know" List**

The following ingredients are listed or exempt:

*Ethanol*

*Isopropanol*

#### **Rhode Island "Right To Know" List**

The following ingredients are listed or exempt:

*Ethanol*

*Isopropanol*

#### **Minnesota "Right To Know" List**

The following ingredients are listed or exempt:

*Ethanol*

*Isopropanol*

#### **New Jersey "Right To Know" List**

The following ingredients are listed or exempt:

*Ethanol*

*Isopropanol*

#### **Pennsylvania "Right To Know" List**

The following ingredients are listed or exempt:

*Ethanol*

*Isopropanol*

### Inventories

#### **EU - EINECS/ELINCS**

All the ingredients are listed or exempt.

**4700BK****Canada - DSL/NDSL**

All the ingredients are listed or exempt.

**US - TSCA**

All the ingredients are listed or exempt.

**Australia - AICS**

*Ethanol*

*Isopropanol*

**Japan - MITI**

*Ethanol*

*Isopropanol*

**Korea - KECI**

*Ethanol*

*Isopropanol*

**China - IECSC**

*Ethanol*

*Isopropanol*

**Philippines - PICCS**

*Ethanol*

*Isopropanol*

**New Zealand - NZIOC**

*Ethanol*

*Isopropanol*

**Taiwan - NECI**

*Ethanol*

*Isopropanol*

**16. Other information**

<b>Issued by</b>	Matthews Marking Systems - Chemical Services Department
<b>Revision date</b>	8/6/2018
<b>Revision</b>	1
<b>SDS No.</b>	5978
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	H225 Highly flammable liquid and vapor. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

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<b>NFPA - instability hazard</b>	Normally stable. (0)
<b>ACA HMIS Health rating.</b>	Moderate hazard. (2)
<b>NFPA - health hazard</b>	Irritation, minor residual injury. (1)
<b>NFPA - flammability hazard</b>	Ignites easily. (3)
<b>ACA HMIS Flammability rating.</b>	Ignites easily. (3)
<b>ACA HMIS Physical hazard rating.</b>	Normally stable. (0)
<b>ACA HMIS Personal protection rating.</b>	B

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.