

**ARTISTRITM P5100+ CYAN PIGMENT INK**

Version 2.0

Revision Date 11/09/2014

Ref. 130000128491

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : ARTISTRITM P5100+ CYAN PIGMENT INK  
MSDS Number : 130000128491

Manufacturer : DuPont  
1007 Market Street  
Wilmington, DE 19898

Product Information : 1-302-774-1000  
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)  
Transport Emergency : CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

**SECTION 2. HAZARDS IDENTIFICATION**

## Potential Health Effects

Skin : May cause skin irritation. Discomfort, itching, redness, or swelling.

Eyes : May cause eye irritation. Tearing, redness, or discomfort.

Inhalation : May cause irritation of respiratory tract.

Ingestion : May cause: Central nervous system depression

Repeated exposure : Adverse effects from repeated dermal exposure may include:, Kidney effects

## Target Organ

Ethane-1,2-diol : Kidney

## Carcinogenicity

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

Ethane-1,2-diol : DuPont has classified this material as a probable human carcinogen.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No.	Concentration
Ethane-1,2-diol	107-21-1	<20 %
Alkyl ether		<10 %
Copper compound		<10 %
Cyclic amide		<10 %
Non regulated ingredients		>50%

Any component not specifically identified is considered a trade secret. Properties and potential hazards of any trade secret component are included in this safety data sheet.

**SECTION 4. FIRST AID MEASURES**

- Skin contact : Wash off immediately with plenty of water. Wash contaminated clothing before re-use. Get medical attention if irritation develops and persists.
- Eye contact : Immediately flush eye(s) with plenty of water. Seek medical advice.
- Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
- Ingestion : Is not considered a potential route of exposure. If swallowed Do NOT induce vomiting. Call a physician or poison control centre immediately.

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**SECTION 5. FIREFIGHTING MEASURES**

## Flammable Properties

Flash point : 93 °C (199 °F)

Fire and Explosion Hazard : Not a fire or explosion hazard. Cool closed containers exposed to fire with water spray.

Suitable extinguishing media : Not combustible.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Keep containers and surroundings cool with water spray.

Firefighting Instructions : Immediately evacuate personnel to safe areas. Wear suitable protective equipment. Wear self-contained breathing apparatus for firefighting if necessary.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers/tanks with water spray.**SECTION 6. ACCIDENTAL RELEASE MEASURES**

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

Safeguards (Personnel) : Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Wear suitable protective equipment.

Spill Cleanup : Contain spill. Soak up with inert absorbent material. Collect and contain contaminated absorbent and dike material for disposal. Keep in suitable, closed containers for disposal. Ventilate the area. Clean contaminated surface thoroughly.

Accidental Release Measures : Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Clean contaminated floors and objects thoroughly while observing environmental regulations.  
Dispose of in accordance with local regulations.



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**SECTION 7. HANDLING AND STORAGE**

- Handling (Personnel) : Avoid breathing vapours or mist. Keep away from heat and flame. Do not use in areas without adequate ventilation.  
 Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Contaminated work clothing should not be allowed out of the workplace. Remove contaminated clothing and protective equipment before entering eating areas. Remove and wash contaminated clothing before re-use.
- Handling (Physical Aspects) : Keep away from heat and sources of ignition. Avoid formation of aerosol.
- Storage : Store at room temperature in the original container. Keep away from sources of ignition - No smoking. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Keep container closed when not in use. Do not reuse empty container.  
 Stable under normal conditions.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Engineering controls : Local exhaust or a laboratory hood should be used when handling the materials. Maintain air concentrations below occupational exposure standards.
- Personal protective equipment

  - Respiratory protection : Provide adequate ventilation.
  - Hand protection : Material: Impervious gloves
  - Eye protection : Wear safety glasses with side shields.

Exposure Guidelines  
 Exposure Limit Values

Ethane-1,2-diol			
TLV	(ACGIH)	100 mg/m3	TLV-C Aerosol.
AEL *	(DUPONT)	10 mg/m3	8 & 12 hr. TWA Particulate.


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AEL *	(DUPONT)	50 ppm	8 & 12 hr. TWA Vapor.
Alkyl ether AEL *	(DUPONT)	10 mg/m3	8 & 12 hr. TWA Aerosol.
AEL *	(DUPONT)	100 ppm	8 & 12 hr. TWA Vapor.
Cyclic amide AEL *	(DUPONT)	5 ppm	8 & 12 hr. TWA

\* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form	: liquid
Color	: blue
Odor	: not significant
pH	: 7 - 9
Boiling point	: 100 °C (212 °F)
Evaporation rate	: Slower than Ether

**SECTION 10. STABILITY AND REACTIVITY**

Stability	: No decomposition if stored normally.
Conditions to avoid	: None reasonably foreseeable.
Incompatibility	: Oxidizing agents Strong acids, alkaline substances
Hazardous decomposition products	: Under fire conditions:, formaldehyde-like


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**SECTION 11. TOXICOLOGICAL INFORMATION**

## Ethane-1,2-diol

Dermal LD50 : &gt; 3,500 mg/kg , Mouse

Oral LD50 : 1,650 mg/kg , Cat

Skin irritation : No skin irritation, Rabbit

Eye irritation : No eye irritation, Rabbit

Skin sensitization : Does not cause skin sensitisation., human

Repeated dose toxicity : Oral  
RatTarget Organs: Kidney  
Kidney damageCarcinogenicity : Not classifiable as a human carcinogen.  
Animal testing did not show any carcinogenic effects.Mutagenicity : Animal testing did not show any mutagenic effects.  
Tests on bacterial or mammalian cell cultures did not show mutagenic effects.Reproductive toxicity : No toxicity to reproduction  
No effects on or via lactation  
Animal testing showed no reproductive toxicity.

Teratogenicity : Evidence suggests the substance is not a developmental toxin in animals.

## Alkyl ether

Dermal LD50 : 13,300 mg/kg , Rabbit

Oral LD50 : 20,760 mg/kg , Rat

Inhalation 4 h LC50 : &gt; 48.1 mg/l , Rat

Inhalation 4 h Acute toxicity estimate : &gt; 5 mg/l , Rat

Skin irritation : slight irritation, Rabbit

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Eye irritation	:	slight irritation, Rabbit
Skin sensitization	:	Did not cause sensitisation on laboratory animals., Guinea pig Patch test on human volunteers did not demonstrate sensitisation properties., human
Repeated dose toxicity	:	Oral multiple species  Oxylate crystal deposition
Carcinogenicity	:	Not classifiable as a human carcinogen.
Mutagenicity	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Animal testing did not show any mutagenic effects.
Reproductive toxicity	:	No toxicity to reproduction Animal testing showed no reproductive toxicity.
Teratogenicity	:	Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

## Copper compound

Dermal LD50	:	> 5,000 mg/kg , Rat
Oral LD50	:	> 16,000 mg/kg , Mouse
Skin irritation	:	No skin irritation, Rabbit
Eye irritation	:	No eye irritation, Rabbit
Skin sensitization	:	Does not cause skin sensitisation., Guinea pig
Repeated dose toxicity	:	Oral Rat  No toxicologically significant effects were found.
Mutagenicity	:	Animal testing did not show any mutagenic effects. Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Reproductive toxicity	:	No toxicity to reproduction



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Animal testing showed no reproductive toxicity.

Teratogenicity : Animal testing showed no developmental toxicity.

Cyclic amide

Dermal LD50 : > 2,000 mg/kg , Rat

Oral LD50 : 8,000 mg/kg , Rat

Inhalation : Rat  
An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.

Skin irritation : No skin irritation, Rabbit

Eye irritation : Eye irritation, Rabbit

Skin sensitization : Does not cause skin sensitisation., Mouse  
Information given is based on data obtained from similar substances.

Repeated dose toxicity : Oral  
Rat

Kidney effects

Mutagenicity : Animal testing did not show any mutagenic effects.  
Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Reproductive toxicity : No toxicity to reproduction  
Animal testing showed no reproductive toxicity.

Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

**SECTION 12. ECOLOGICAL INFORMATION**

Aquatic Toxicity  
Ethane-1,2-diol

96 h LC50 : Pimephales promelas (fathead minnow) 72,860 mg/l




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96 h ErC50 : Pseudokirchneriella subcapitata (green algae) 6,500 mg/l  
 48 h EC50 : Daphnia magna (Water flea) > 100 mg/l OECD Test Guideline 202

## Alkyl ether

96 h LC50 : Pimephales promelas (fathead minnow) 75,200 mg/l  
 48 h LC50 : Leuciscus idus (Golden orfe) > 10,000 mg/l  
 24 h EC50 : Daphnia magna (Water flea) > 10,000 mg/l

## Copper compound

96 h LC50 : Oncorhynchus mykiss (rainbow trout) 355.6 mg/l  
 72 h ErC50 : Desmodesmus subspicatus (green algae) > 100 mg/l OECD Test Guideline 201  
 48 h EC50 : Daphnia magna (Water flea) > 500 mg/l Directive 67/548/EEC, Annex V, C.2.

## Cyclic amide

72 h ErC50 : Desmodesmus subspicatus (green algae) > 500 mg/l  
 48 h EC50 : Daphnia magna (Water flea) > 500 mg/l Directive 67/548/EEC, Annex V, C.2.

## Environmental Fate

## Ethane-1,2-diol

Biodegradability : Readily biodegradable. 90 - 100 % OECD Test Guideline 301  
 Bioaccumulation : Bioaccumulation is unlikely.

## Alkyl ether

Biodegradability : 90 %  
 Readily biodegradable.  
 Bioaccumulation : Bioconcentration factor (BCF) : 10 - 180  
 Bioaccumulation is unlikely.

## Cyclic amide

Biodegradability : Biodegradable  
 Readily biodegradable.



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Bioaccumulation : Bioaccumulation is unlikely.

**SECTION 13. DISPOSAL CONSIDERATIONS**

- Waste Disposal : If recycling is not practicable, dispose of in compliance with local regulations. Never place unused product down any indoor or out door drain.
- Container Disposal : Do not reuse empty container. Contaminated/not cleaned containers should be treated/handled like product waste. Dispose of container properly. Refer to applicable Local, State/Provincial, and Federal Regulations, as well as industry Standards.

**SECTION 14. TRANSPORT INFORMATION**

Not classified as dangerous in the meaning of transport regulations.

**SECTION 15. REGULATORY INFORMATION**

- TSCA : On the inventory, or in compliance with the inventory
- SARA 313 Regulated Chemical(s) : Ethane-1,2-diol
- CERCLA Reportable Quantity : 29 lbs  
Based on the percentage composition of this chemical in the product.:  
Copper compound
- California Prop. 65 : WARNING! This product contains a chemical or chemicals known to the State of California to cause cancer.  
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.



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PA Right to Know  
Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Ethane-1,2-diol, Alkyl ether, Cyclic amide

NJ Right to Know  
Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Ethane-1,2-diol, Copper compound

**SECTION 16. OTHER INFORMATION**

The DuPont Oval Logo is a registered trademark of E.I. du Pont de Nemours and Company.

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

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