

ARTISTRI® P5400+ BLACK TEXTILE INK

Version 2.0

Revision Date 12/02/2016

Ref. 130000129166

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

1. IDENTIFICATION

Product name : ARTISTRI® P5400+ BLACK TEXTILE INK

Recommended use of the chemical and restriction on use

Recommended use : - Printing ink

Manufacturer or supplier's details

Company : DuPont do Brasil S/A
Street address : Alameda Itapecuru, 506 - Alphaville
Barueri - São Paulo CEP 06454-080
Brazil
Telephone : 0800-171715
Telefax : (11) 4166-8720
E-mail address : info.brasil@bra.dupont.com

Emergency telephone number : Medical Emergency Number: 0800-7010109 (Planitox)
Transportation Emergency: 0800 118270 (ABIQUIM-PRO-QUIMICA)
Medical Emergency: 0800-7010109 (Planitox)

2. HAZARDS IDENTIFICATION**Product hazard category**

Specific target organ toxicity - repeated exposure : Category 2
Acute aquatic toxicity : Category 3

Label content

Pictogram :



Signal word : Warning

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Hazardous warnings : May cause damage to organs through prolonged or repeated exposure.
(Kidney)
Harmful to aquatic life.

Hazardous prevention measures : Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Avoid release to the environment.
Get medical advice/ attention if you feel unwell.
Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Components

Chemical name	CAS-No.	Concentration
Ethane-1,2-diol	107-21-1	<10 %
2-Pyrrolidone	616-45-5	<5 %
1,2-Benzisothiazol-3(2H)-one	2634-33-5	<0.05 %

4. FIRST AID MEASURES

Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt seek medical advice.

First aid measures for different exposure routes

Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If breathing is irregular or stopped, administer artificial respiration. Get medical attention.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.

Eye contact : In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical advice/ attention.

Ingestion : If swallowed, call a poison control centre or doctor immediately. Rinse mouth with water. DO NOT induce vomiting unless directed to do so by a physician or poison control center.

Main symptoms and hazards : No information available.

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- Protection of first-aiders : No information available.
- Notes to physician : No specific intervention is indicated.
Treat symptomatically.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray, Dry chemical, Carbon dioxide (CO₂)
- Specific hazards : Hazardous decomposition products formed under fire conditions. (see also section 10) Avoid breathing decomposition products.
- Specific firefighting procedures : Evacuate personnel to safe areas. Stop spill/release if it can be done with minimal risk. Do not allow run-off from fire fighting to enter drains or water courses.
- Special protective equipment for firefighters : Exposure to decomposition products may be a hazard to health. Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Wear suitable protective equipment.
Dispose of in accordance with local regulations.
- Environmental precautions : 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.
- Methods for cleaning up : 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 floors and objects thoroughly while observing environmental regulations.


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7. HANDLING AND STORAGE
Handling

Technical measures/Precautions : Avoid inhalation, ingestion and contact with skin and eyes. Do not use in areas without adequate ventilation. For personal protection see section "Exposure controls/personal protection"

Precautions for safe handling : Normal measures for preventive fire protection.

Storage

Suitable storage conditions : Keep containers tightly closed in a cool, well-ventilated place. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Do not reuse empty container.

Stable under normal conditions.

Hygiene measures

: Handle in accordance with good industrial hygiene and safety practice. Keep container closed. Keep away from food and drink. Wash hands before eating, drinking, or smoking. Remove contaminated clothing and protective equipment before entering eating areas. Wash contaminated clothing before re-use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Engineering measures

: Ensure adequate ventilation. Maintain air concentrations below occupational exposure standards. General mechanical ventilation is normally adequate but use local exhaust where necessary to maintain exposures below acceptable limits.

Control parameters

Ethane-1,2-diol TLV	(ACGIH)	100 mg/m ³	TLV-C	Aerosol.
Ethane-1,2-diol AEL *	(DUPONT)	10 mg/m ³	8 & 12 hr. TWA	Particulate.
Ethane-1,2-diol AEL *	(DUPONT)	50 ppm	8 & 12 hr. TWA	Vapor.
Ethane-1,2-diol OEL	(Brazil)	100 mg/m ³	TLV-C	Aerosol.
2-Pyrrolidone 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.

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Biological standards : No information available.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.

Hand protection : Material: Impervious gloves
Gloves must be inspected prior to use., Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough., The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other., The exact break through time can be obtained from the protective glove producer and this has to be observed., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Eye protection : Wear safety glasses or coverall chemical splash goggles.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., Lightweight protective clothing and safety shoes are recommended.

General protective measures : No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance (Physical state, form, colour, etc.)**

Physical state : liquid

Form : liquid

Colour : black

Odour : not significant

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Odour Threshold : no data available**pH** : 7 - 9**Melting point/freezing point**

no data available

Boiling point/boiling range

Boiling point : 100 °C

Flammability (solid, gas) : no data available**Flash point** : > 93 °C**Evaporation rate** : Slower than Ether**Decomposition temperature** : no data available**Auto-ignition temperature** : no data available**Explosion limits**

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : no data available**Vapour density** : no data available**Density**

no data available

Solubility(ies)

Water solubility : no data available

Solubility in other solvents : no data available

Partition coefficient: n-octanol/water : no data available

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Volatility rate : Slower than Ether

Viscosity, dynamic : no data available

Viscosity, kinematic : no data available

10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Stability : Stable at normal temperatures and storage conditions.
No dangerous reaction known under conditions of normal use.
The product is chemically stable under recommended conditions of storage, use and temperature.

Possible hazardous reactions under specific conditions : None reasonably foreseeable.

Conditions to avoid : Avoid extreme heat. Do not freeze.

Materials to avoid : Acids, bases and strong oxidizing agents

Hazardous decomposition products : No decomposition if stored and applied as directed.
Under fire conditions:, Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
Formaldehyde

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11. TOXICOLOGICAL INFORMATION

Acute toxicity

: Ethane-1,2-diol:

Oral: LD50/Cat : 1,650 mg/kg

Dermal: LD50/Mouse : > 3,500 mg/kg

2-Pyrrolidone:

Oral: LD50/Rat : 8,000 mg/kg

Method: OECD Test Guideline 401

Inhalation: LC50/4 h/Rat :

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

1,2-Benzisothiazol-3(2H)-one:

Oral: LD50/Rat : 670 mg/kg

Central nervous system effects

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

Skin corrosion/irritation

: Ethane-1,2-diol:

Species: Rabbit

Classification: Not classified as irritant

Result: No skin irritation

2-Pyrrolidone:

Species: Rabbit

Classification: Not classified as irritant

Result: No skin irritation

Method: OECD Test Guideline 404

1,2-Benzisothiazol-3(2H)-one:

Species: Rabbit

Classification: Irritating to skin.

Result: Skin irritation

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Information given is based on data obtained from similar substances.

Serious eye damage/eye
irritation

: Ethane-1,2-diol:

Species: Rabbit

Classification: Not classified as irritant

Result: No eye irritation

2-Pyrrolidone:

Species: Rabbit

Classification: Irritating to eyes.

Result: Eye irritation

1,2-Benzisothiazol-3(2H)-one:

Species: Rabbit

Classification: Risk of serious damage to eyes.

Result: Severe eye irritation

Information given is based on data obtained from similar substances.

Respiratory sensitisation /
Skin sensitisation

: Ethane-1,2-diol:

Species: human

Classification: Does not cause skin sensitisation.

Result: Does not cause skin sensitisation.

2-Pyrrolidone:

Species: Mouse

Classification: Does not cause skin sensitisation.

Result: Does not cause skin sensitisation.

Method: OECD Test Guideline 429

Information given is based on data obtained from similar substances.

1,2-Benzisothiazol-3(2H)-one:

Local lymph node test

Species: Mouse

Classification: May cause sensitisation by skin contact.

Result: Causes sensitisation.

Species: human

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Classification: May cause sensitisation by skin contact.

Result: Positive in human patch test.

Mutagenicity

: Ethane-1,2-diol:

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

2-Pyrrolidone:

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

1,2-Benzisothiazol-3(2H)-one:

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

Carcinogenicity

: Ethane-1,2-diol:

Not classifiable as a human carcinogen. Animal testing did not show any carcinogenic effects.

Reproductive toxicity

: Ethane-1,2-diol:

No toxicity to reproduction No effects on or via lactation Animal testing showed no reproductive toxicity.

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

2-Pyrrolidone:

No toxicity to reproduction Animal testing showed no reproductive toxicity. Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

1,2-Benzisothiazol-3(2H)-one:

No toxicity to reproduction Animal testing showed effects on reproduction at levels equal to or above those causing parental toxicity. Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

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Specific target organ toxicity - single exposure : no data available

Specific target organ toxicity - repeated exposure : no data available

Aspiration toxicity : no data available

Other : ARTISTRI® P5400+ BLACK TEXTILE INK:

No data is available on the product itself.
Information given is based on data on the components.

Ethane-1,2-diol:

Repeated dose toxicity: Oral, Rat
Kidney damage
Target Organs: Kidney

2-Pyrrolidone:

Repeated dose toxicity: Oral, NOEL: Rat 207 mg/kg
OECD Test Guideline 408
Kidney effects

1,2-Benzisothiazol-3(2H)-one:

Repeated dose toxicity: Oral, Rat
No toxicologically significant effects were found.

12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : Ethane-1,2-diol:

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

1,2-Benzisothiazol-3(2H)-one:

LC50/96 h/Oncorhynchus mykiss (rainbow trout): 1.6 mg/l

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Other	: Ethane-1,2-diol: ErC50/96 h/Pseudokirchneriella subcapitata (green algae): 6,500 mg/l EC50/48 h/Daphnia magna (Water flea): > 100 mg/l Method: OECD Test Guideline 202 2-Pyrrolidone: ErC50/72 h/Desmodesmus subspicatus (green algae): > 500 mg/l EC50/48 h/Daphnia magna (Water flea): > 500 mg/l Method: Directive 67/548/EEC, Annex V, C.2. 1,2-Benzisothiazol-3(2H)-one: EC50/72 h/Algae: 0.15 mg/l EC50/48 h/Aquatic invertebrates: 0.047 mg/l
Persistence and degradability	: Ethane-1,2-diol: Exposure time: 10 d Biodegradation: 90 - 100 % 2-Pyrrolidone: Readily biodegradable.
Bioaccumulation	: Ethane-1,2-diol: Bioaccumulation is unlikely. 2-Pyrrolidone: Bioaccumulation is unlikely. 1,2-Benzisothiazol-3(2H)-one: Bioaccumulation is unlikely.
Mobility in soil	: no data available
Other adverse effects	: ARTISTRI® P5400+ BLACK TEXTILE INK:

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No data is available on the product itself. Information given is based on data on the components.

13. CONSIDERATIONS REGARDING FINAL DISPOSAL

Waste disposal methods : If recycling is not practicable, dispose of in compliance with local regulations. Do not reuse empty container. Never place unused product down any indoor or outdoor drain. Contaminated/not cleaned containers should be treated/handled like product waste. Dispose of container properly.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

15. INFORMATION ABOUT REGULATIONS

Refer to section 2 of this SDS for classification according to the GHS.

16. OTHER INFORMATION

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Significant change from previous version is denoted with a double bar.

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