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## Material Safety Data Sheet

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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name : Cyan Ink Cartridge  
Product Code : IP6-103  
-Application model : IP-6600/IP-6900  
Manufacturer's Name: Seiko I Infotech Inc.  
Quality Assurance Department  
Address : 563, Takatsuka-Shinden, Matsudo-shi, Chiba, 270-2222, Japan  
Telephone Number : +81-47-391-2349  
Fax Number : +81-47-391-0952

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### 2. HAZARD IDENTIFICATION

Classification : Harmful preparation.  
Route of entry: Inhalation, Ingestion, and Skin.  
Harm to health: Contact with eyes may result in irritation.  
Contact with skin may result in irritation.  
Ingestion may result in gastric disturbance.  
Prolonged or repeated inhalation of vapor may cause headaches, dizziness or nausea.  
Harm to ecological: No information available.  
Risk of combustion and explosion: The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Vapor/air mixtures is explosive.

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Main Ingredients                        | Content (%) | CAS No.  | Symbols & R-phrases |
|-----------------------------------------|-------------|----------|---------------------|
| Ethylene glycol monobutyl ether acetate | 80-90       | 112-07-2 | Xn ; R20/21         |
| N-Methyl pyrrolidone                    | <5          | 872-50-4 | Not applicable      |
| Polymer                                 | 1-10        | Listed   | Not applicable      |
| Dispersant                              | 0,1-5       | Listed   | Not applicable      |
| Pigment                                 | 1-10        | Listed   | Not applicable      |

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### 4. FIRST AID MEASURES

**Skin Contact:** In case of contact, immediately wash skin with soap and plenty of water. If irritation develops, get medical attention. Remove contaminated clothing and shoes.

**Eye Contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If irritation develops, get medical attention.

**Inhalation :** Move to fresh air area. Call a physician.

**Ingestion :** If swallowed, seek medical advice immediately.

**Further Medical Treatment:** None

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### 5. FIRE FIGHTING MEASURES

**Hazardous properties:** Volatility is high and easy to ignite.  
The volatilized gas may catch fire by a distance ignition source.  
Must be kept away from flame or spark.

**Suitable extinguishing media:** Foam, CO<sub>2</sub>, Dry chemicals and Water spray.

**Not to be used extinguishing media:** Water (Jet)

**Hazardous decomposition products:** Burning in insufficient air supply may produce toxic fume of carbon monoxide.

**Protective equipment for Fire fighters:** Fire fighters should wear self-contained breathing apparatus to avoid inhalation of smoke and vapors.

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## 6. ACCIDENTIAL RELEASE MEASURES

Shut off all sources of ignition or open flame. Keep public away. For small spills, scrape spilled materials with disposal towels or dry sand. For large spills, dike and cover liquid with foam. Take up the spill by a plastic tool and put in a sealable container. Prevent spills from entering sewers, watercourses or low areas to avoid pollution.

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## 7. HANDLING AND STORAGE

Handling: Do not handle or store near an open flame, sources of heat or sources of ignition. Use only in the well-ventilated areas and wear proper protective equipment to avoid skin contact, eye contact and vapor inhalation.

Storage: Store containers in a cool and dark place. Keep containers closed.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits:

Ethylene glycol monobutyl ether acetate ACGIH (TWA) :20ppm

N-Methyl pyrrolidone ACGIH (TWA) :Not established

Engineering controls: Use local exhaust ventilation.

Respiratory protection: Respirator to avoid breathing organic solvent vapor.

Hand protection: Wear chemical resistant gloves

Eye protection: Use safety glasses or goggles.

Skin protection: Wear working clothes

Other protection: No smoking, No eating and No drinking at the work place.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Blue colored liquid

Odor: solvent odor.

Boiling point: >191°C (Ethylene glycol monobutyl ether acetate)

Melting point: >-64,6°C (Ethylene glycol monobutyl ether acetate)

Flash point: 73.0°C (Seta closed cup)

Auto ignition temperature: 270°C(N-Methyl pyrrolidone)

Flammable limit: Lower 0.8vol%( Ethylene glycol monobutyl ether acetate)

Upper 8.5vol%( Ethylene glycol monobutyl ether acetate)

Specific gravity: 0,96-1.00g/cm<sup>3</sup>(25°C)

Vapor pressure: <40 Pa (20°C) ( Ethylene glycol monobutyl ether acetate)

Vapor density: >3.4 (N-Methyl pyrrolidone) (Air=1)

Solubility in water:

In Water: 1,1 wt% (20°C) ( Ethylene glycol monobutyl ether acetate)

Easily soluble (N-Methyl pyrrolidone)

Water in : 1,6 wt% (20°C) ( Ethylene glycol monobutyl ether acetate)

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## 10. STABILITY AND REACTIVITY

Stability: Stable  
Materials to avoid : Acids and oxidizing agents  
Conditions to avoid: Extremely high temperature  
Hazardous reactions: Not occur  
Decomposition products: No data

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## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

|                                         |               |                           |                           |
|-----------------------------------------|---------------|---------------------------|---------------------------|
| Ethylene glycol monobutyl ether acetate | Oral Toxicity | LD <sub>50</sub> ( rat )  | 2,400mg/kg <sup>1)</sup>  |
|                                         | Skin Toxicity | LD <sub>50</sub> (rabbit) | 1,500mg/kg <sup>1)</sup>  |
| N-Methyl pyrrolidone                    | Oral Toxicity | LD <sub>50</sub> ( rat )  | 4,200mg/kg <sup>2)</sup>  |
|                                         | Skin Toxicity | LD <sub>50</sub> (marmot) | >8,000mg/kg <sup>2)</sup> |

Carcinogenicity: N-Methyl pyrrolidone: Shows negative result on the following exposure test.  
Inhalation (rat) 0mg/L(0ppm), 0.04mg/L(10ppm), 0.4mg/L(99ppm), 6hr/d,  
5d/w, 2years

Mutagenicity: No information available.

Other toxicity information: No information available.

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## 12. ECOLOGICAL INFORMATION

Environmental fate and distribution: This product is partially soluble in water. Treat using the best available techniques to avoid environmental contamination.

Toxicity: No information available.

Effect on effluent treatment: No data.

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## 13. DISPOSAL CONSIDERATIONS

Comply with all federal, state and local regulations.

Do not dump this product into sewers, on the ground or into any body of water.

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## 14. TRANSPORT INFORMATION

UN CLASS: Not applicable

UN NUMBER: Not applicable

PACKING GROUP: Not applicable

PROPER SHIPPING NAME: Ink

Classification: This product is not classified as hazardous for transport.

Follow all regulations in your country.

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## 15. REGULATORY INFORMATION

All ingredients in this product are listed on the EINECS or exempt from listing.

Classification: Harmful preparation.

Indication of danger: Harmful

Symbols of danger: Xn

R-phrase: R20/21 Harmful by inhalation and in contact with skin.

R36/38 Irritating to eyes and skin.

S-phrase: S24 Avoid contact with skin

S41 In case of fire and/or explosion do not breathe fumes.

Follow all regulations in your country

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## 16. OTHER INFORMATION

This data sheet was prepared in accordance with directive 2001/58/EEC.

The above information relates only to the safety of the products designated based on our current state of knowledge. No responsibility is accepted for any error or omissions.

### Reference

- 1) Clayton and Clayton, Patty's industrial Hygiene and Toxicology 4<sup>th</sup> Edition(The Japanese Version)
- 2) N-Methyl pyrrolidone Material Safety Data Sheet

### History

Date of issue: 26-5-2009

Version : 2