

Safety Data Sheet**Pigment Ink For Textile Cartridge Cyan**

Revised 30 June 2003

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Pigment Ink For Textile Cartridge Cyan**
 Product Code: **SPC-0350C**
 Company Identification
 Manufacturer's Name / Supplier Address **Mimaki Engineering Co., Ltd.**
5-9-41 Kita Shinagawa, Shinagawa-ku Tokyo 14-0001

Phone Number / Fax **81-3-5420-8671 / 81-3-5420-8687**
 Contact Person **Masaaki Fujita**

2. COMPOSITION / INFORMATION ON INGREDIENTS

Components(% by weight)

<u>Material</u>	<u>CAS Number</u>	<u>Weight%</u>
Acrylic polymer	Not Hazardous	3-6
Residual monomers	Not Required	<0.05
Ammonium nitrate	6484-52-2	2-4
Glycols	Trade Secret	11-13
2-Pyrrolidone	616-45-5	7-9
Nonionic surfactant	Trade Secret	1-2
Aqua ammonia	1336-21-6	0.2 MAX
Water	7732-18-5	64-67
C.I. Pigment Blue 15	147-14-8	2-4

See SECTION7, Handling and Storage.
 See SECTION8, Controls/ Personal Protection

3. HAZARDS IDENTIFICATION**PRIMARY ROUTES OF EXPOSURE**

Inhalation
 Eye Contact
 Skin contact

INHALATION

Inhalation of vapor or mist can cause the following:
 - irritation of nose, throat, and lungs – coughing – chest pain – headache – nausea – vomiting -
 dizziness

Eye Contact

Direct contact with material can cause the following:
 - severe irritation – tearing – blurring of vision – reddening

Skin Contact

The solvent(s) in this material can be harmful if absorbed through intact skin.
 Material can cause the following:

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- irritation – reddening
- Prolonged or repeated skin contact can cause the following:
- defatting and drying of the skin which can lead to irritation and dermatitis

Ingestion

- Material is possibly harmful if swallowed.
- Material can cause the following:
- gastrointestinal irritation – drowsiness – headache – nausea – vomiting – diarrhea – abdominal pain – dizziness
- Material in large doses can cause the following:
- convulsions – stupor – coma - death

Delayed Effects

- Prolonged or repeated overexposure to component 4 can cause the following:
- kidney damage – liver damage

4. FIRST AID MEASURE**Inhalation**

Move subject to fresh air. If breathing is difficult, give oxygen. Give artificial respiration if breathing has stopped. See a physician.

Eye Contact

Flush eyes with a large amount of water for at least 15 minutes. Get prompt medical attention.

Skin Contact

Remove contaminated clothing. Wash affected skin areas thoroughly with soap and water. See a physician. Wash contaminated clothing thoroughly before reuse. Do not take clothing home to be laundered.

Ingestion

Induce vomiting by giving 2 glasses of water to drink and touching back of subject's throat with finger. IMMEDIATELY see a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep airway clear.

Note to Physician

This material may have a mechanism of intoxication similar to ethylene glycol. On that basis, treatment similar to ethylene glycol may be of benefit. Ethylene glycol is moderately toxic by ingestion. Systemic effects include possible liver and kidney damage. If swallowed, immediate evacuation of the stomach is advisable. Ethanol is an antidote. Its early administration may block the formation of nephrotoxic metabolites of ethylene glycol in the liver. Ethanol should be given orally first in a 50% solution, then in a 20% solution. Hemodialysis is necessary.

5. FIRE FIGHTING MEASURES

Flash point	:> 98	†/A:SQBM.D-93
Auto-ignition Temperature	: Not Applicable	
Lower Explosive Limit	: Not Applicable	
Upper Explosive Limit	: Not Applicable	

Unusual Hazards

Material can splatter above 100C/212F. Dried product can burn.
Closed containers may rupture via pressure build-up when exposed to fire or extreme heat. Toxic fumes are generated when material is exposed to fire or fire condition.

Extinguishing Agents

Use extinguishing media appropriate for surrounding fire.

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Personal Protective Equipment

Wear self-contained breathing apparatus (pressure-demand NIOSH approved or equivalent) and full protective gear.

Special Procedures

Move containers promptly out of fire zone. If removal is impossible, cool containers with water spray. Remain upwind. Avoid breathing smoke.

6. ACCIDENTAL RELEASE MEASURES

Personal Protection

Appropriate protective equipment must be worn when handling a spill of this material. See SECTION8, Exposure Controls / Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION4, First Aid Measures, for actions to follow.

Procedure

Keep spectators away. Ventilate the spill area. Floor may be slippery; use care to avoid falling. Contain spills immediately with inert materials (e. g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.
CAUTION: Keep spills and cleaning run off out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

Storage conditions

The minimum recommended storage temperature for this material is 4C / 40F. The maximum recommended storage temperature for this material is 60C / 140F.
Keep container tightly closed when not in use.

Handling Procedure

Vapors can be evolved when material is heated during processing operations. See SECTION8, Exposure Controls / Personal Protection, for types of ventilation required.
NOTE: Formaldehyde will be generated under acidic conditions.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit Information

No.1	Material	CAS Number	Weight%
1	Acrylic polymer	Not Hazardous	3-6
2	Residual monomers	Not Required	<0.05
3	Ammonium nitrate	6484-52-2	2-4
4	Glycols	Trade Secret	11-13
5	2-Pyrrolidone	616-45-5	7-9
6	Nonionic surfactant	Trade Secret	1-2
7	Aqua ammonia	1336-21-6	0.2 MAX
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Composition	No.	Units	Mimaki		OSHA		ACGIH	
			TWA	STEL	TWA	STEL	TWA	STEL
	1		None	None	None	None	None	None
	2		a	a	a	a	a	a
	3		None	None	None	None	None	None
	4		None	None	None	None	None	None
	5		None	None	None	None	None	None
	6		None	None	None	None	None	None
	7	ppm	25b	35b	50b	None	25b	35b
	8		None	None	None	None	None	None
	9	mg/m3	None	None	1		1	

a Not Required b As Ammonia

Respiratory Protection

A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in 'Exposure Limit Information'.

UP to 10times the exposure: Wear a properly fitted NIOSH approve (or equivalent) half-mask, air -purifying respirator,

OR

Full - face piece, airline respirator in the pressure demand mode.

Above 1000ppm organic vapor or Unknown: Wear a property

NIOSH approved (or equivalent) self -contained breathing Apparatus in the pressure demand mode,

OR

Full - face piece, airline respirator in the pressure demand mode with emergency escape provision.

Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and R95 or P95 filters.

Eye Protection

Use chemical splash goggles (ANSI Z87-1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

Hand Protection

Chemical - resistant glove should be worn whenever this material is handled.

Glove permeation data does not exist for this material. This following glove(s) should be used for splash protection only:

- Neoprene

Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Rinse and remove gloves immediately after use. Wash hands with soap and water.

Other Protection

Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

Engineering Controls (Ventilation)

Use local exhaust ventilation with a minimum capture velocity of 100ft/min. (0.5m/sec.) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Other Protective Equipment

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Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Translucent
Color	Blue – green
State	liquid
Odor Characteristic	Ammonia odor
pH	7.5 to 9.5
Viscosity	2.5 to 4.0 cps
Specific Gravity (Water = 1)	0.95 to 1.05
Vapor Density (Air=1)	< 1 Water
Vapor pressure	17mmHg Water
Melting Point	No Data
Boiling Point	100°C/212° F Water
Solubility in Water	Dilutable
Percent Volatility	64 to 67%
Evaporation Rate (<i>BAC = 1</i>)	< 1 Water

The physical and chemical data given in Section 9 are typical values for this product and are not intended to be product specifications.
See Section 5, Fire Fighting Measures

10. STABILITY AND REACTIVITY**Instability**

This material is considered stable.

Hazardous Decomposition Products

Thermal decomposition may yield the following:
- acrylic monomers

Hazardous Polymerization

Product will not undergo polymerization.

Incompatibility

There are no known materials which are incompatible with this product.

11. TOXICOLOGICAL INFORMATION**Acute Data**

No toxicity data are available for this material.

The information shown in Section 3, Hazards Identification, is based on toxicity profiles of similar materials or on the components present in this material.

Toxicity data for component number 6:

Eye Irritation – rabbit: severe irritation

Skin Irritation – rabbit: slight irritation

12. ECOLOGICAL INFORMATION

No applicable data

13. DISPOSAL CONSIDERATIONS

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Procedure

Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.
(See 40 CFR 268)

14. TRANSPORTATION INFORMATION (Not meant to be all inclusive)

US DOT Hazard Class: NONREGULATED

15. REGULATORY INFORMATION (Not meant to be all inclusive)

Workplace Classification

This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).

This product is a 'controlled product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).

SARA TITLE 3: Section 311/312 Categorizations (40CFR 370)

This product is a hazardous chemical under 29CFR 1910.1200, and is Categorized as an immediate and delayed health hazard.

SARA TITLE 3: Section 313 Information (40CFR 372)

This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

CERCLA Information (40CFR 302.4)

Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

Waste Classification

When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, reactivity, and is not listed in 40 CFR 261.33.

The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

United States

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic substances Control Act (TSCA) Chemical Substance Inventory.

Pennsylvania

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right - to - Know Act.

California (Proposition 65)

This product contains trace levels of a component or components know to the state of California to cause cancer:

-Ethyl acrylate (140 - 88- 5)

Safety Data Sheet**16. OTHER INFORMATION****ABBREVIATIONS:**

ACGIH = American Conference of Governmental Industrial Hygienists

OSHA = Occupational Safety and Health Administration

TLV = Threshold Limit Value

PEL = Permissible Exposure Limit

TWA = Time Weighted Average

STEL = Short - Term Exposure Limit

BAC = Butyl acetate

Italics denote a revision from previous MSDS in this area/

End of MSDS

