

Material Safety Data Sheets

1. Product and Company Identification

Product Name	: Pigment Ink For Textile Black
Product Code	: SPC-0350K
General Use	: Ink jet printing ink
Product Description	: Pigment ink
MSDS Number	: 031-33W03KC
Manufacture	
Company Name	: Mimaki Engineering Co., Ltd
Address	: 2182-3 Otsu, Shigeno, Tomi-shi, Nagano 389-0512 Japan
Telephone No.	: +81-268-64-2413
Importer/Distributor Established in USA	
Company Name	: MIMAKI USA. INC.
Address	: 150 Satellite Boulevard, suite A, Suwanee, Georgia 30024, U.S.A
Telephone No.	: 1-678-730-0100
Emergency Telephone No.	: +81-268-64-2413

2. Hazards Identification

Emergency Overview	: Causes severe eye irritation. Prolonged or repeated overexposure to the solvent(s) in this material can cause the following: liver damage, kidney damage, embryofetotoxic effects. Prolonged or repeated overexposure to carbon black can cause lung effects.
Potential Health Effects	
Inhalation	: Inhalation of solvent vapor or mist can cause the following: irritation of nose, throat, and lungs, headache, nausea.
Eye Contact	: Direct contact with material can cause the following: severe irritation, tearing, reddening.
Skin Contact	: Material can cause the following: slight irritation.
Ingestion	: Material is possibly harmful if swallowed. Material can cause the following: abdominal pain, vomiting, nausea, depression, diarrhea, gastrointestinal irritation, dizziness.

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Carcinogens : Prolonged or repeated overexposure to carbon black can cause lung effects.

Modified Carbon black
 ACGIH: Not classifiable as a human carcinogen.
 IARC: Possible carcinogen.
 US CA CRT: Carcinogenic.
 NIOSH Potentially carcinogenic.

Potential Environmental Effects : Not available

HMIS Rating (scale 0 – 4)

Health = 2*

Flammability= 0

Reactivity = 0

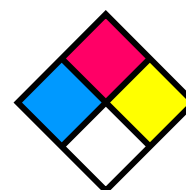
NFPA Rating (scale 0 – 4)

Health =

Flammability =

Instability =

Special =



3. Composition / Information On Ingredients

No	Chemical Name	Wt%	CAS No.	Chemical Formula
1	Acrylic polymer(s)	3.0-6.0%	Not Hazardous	Trade Secret
2	Modified Carbon black	2.0-4.0%	Trade Secret	Trade Secret
3	Residual monomers	<100.0 PPM	Not Required	
4	Glycols	11.0-13.0%	Trade Secret	Trade Secret
5	Pyrrolidone	7.0-9.0%	616-45-5	C ₄ H ₇ NO
6	Anionic / nonionic surfactant(s)	2.0-4.0%	Trade Secret	Trade Secret
7	Water	66.0-69.0%	7732-18-5	H ₂ O

OSHA Hazardous Components (29 CFR 1910. 1200) : This product is considered hazardous under the OSHA Hazard Communication Standard.

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4. First Aid Measures

Inhalation	: Move to fresh air. Give artificial respiration if breathing has stopped. Consult a physician.
Eye Contact	: Immediately flush eye(s) with plenty of water. Get prompt medical attention.
Skin Contact	: Wash with water and soap as a precaution. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.
Ingestion	: Drink 1 or 2 glasses of water. Consult a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep airway clear.
Protection to first-aiders	

5. Fire Fighting Measures

Flammable Properties	Flash point: Noncombustible Lower explosion limit: Not applicable Upper explosion limit: Not applicable
Thermal decomposition	Combustion generates toxic fumes of the following: nitrogen oxides (NOx), Carbon oxides, sulfur oxides.
Extinguishing Media	: Use the following extinguishing media when fighting fires involving this material: polar solvent (alcohol) foam Water spray Dry chemical Carbon dioxide (CO ₂)
Fire Fighting Instructions	: Wear full fire-fighting turn-out gear (full bunker gear) and respiratory protection (self-contained breathing apparatus). Evacuate area and fight fire from a safe distance. Containers can rupture and release highly toxic vapors or decomposition products if exposed to heat. Dried product can burn. Material can splatter above 100C/212F.
Further information	: Remain upwind. Avoid breathing smoke. Use water spray to cool unopened containers.

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6. Accidental Release Measures

- Methods for cleaning up : Contain spilled liquid with sand or earth. DO NOT use combustible materials, such as sawdust.
Eliminate all ignition sources, use explosion-proof equipment.
Vacuum or sweep material and place in a disposal container.
The material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.
- Personal precaution : Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow.

7. Handling And Storage

- Handling : Keep from freezing - product stability may be affected.
Avoid contact with skin, eyes and clothing.
Wash thoroughly after handling.
Keep container tightly closed.
Store in a cool, dry, well ventilated place.
Do not dismantle a cartridge.
Formaldehyde will be generated under acidic conditions.
Maintain adequate ventilation under these conditions to prevent exposure to formaldehyde above ceiling of 0.3 ppm.
- Storage : 5 - 25 °C (41 - 77 °F)
- FURTHER INFORMATION : Monomer vapors can be evolved when material is heated during processing operations. See SECTION 8, for types of ventilation required.
Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations.
Dispose empty container in a sanitary landfill or by incineration as allowed by state and local authorities.

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8. Exposure Controls / Personal Protection

Exposure Limit Values

No	Chemical Name		TWA	STEL	Ceiling	Skin	SEN
1	Modified Carbon black	OSHA PEL	3.5 mg/m ³	N.E	N.E	N.E	N.E
		ACGIH	3.5 mg/m ³	N.E	N.E	N.E	N.E

Exposure Controls

Occupational Exposure Controls

Engineering Controls : Use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/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.

Personal Protection

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 10 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator. Up to 1000 ppm organic vapor: Wear a properly fitted NIOSH approved (or equivalent) full-facepiece, air-purifying respirator, OR full-facepiece, airline respirator in the pressure demand mode. Above 1000 ppm organic vapor or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-facepiece, 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.

Hand Protection



Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): Neoprene gloves, Gloves should be

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Eye Protection



Skin Protection



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.

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

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

To prevent any contact, wear impervious clothing such as gloves, apron, boots, or whole body suits made from neoprene, as appropriate.

Environmental Exposure Controls

: Not available

9. Physical And Chemical Properties

Appearance	- Physical state	: liquid
	- Colour	: black
Odour		: mild
pH		: 7.5 - 9.5
Boiling Point / Boiling Range		: 100 °C (212.00 °F) Water
Melting Point / Merging Range		: Not available
Decomposition Temperature		: Not available
Flash Point		: Noncombustible
Auto-Ignition Temperature		: Not available
Flammability(solid, gas)		: Not available
Vapour Pressure		: 17.0 mmHg at 20 °C (68 °F) Water
Specific Gravity		: 0.95 - 1.05
Solubility		: Not available
Water solubility		: Dilutable
Viscosity		: 2.500 - 4.000 mPa.s
Vapour density		: <1.0Water
Evaporation Rate		: <1.00 Water
VOC		: 14.0g/l

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10. Stability And Reactivity

Conditions To Avoid	: Avoid temperatures above 177C/350F, the onset of polymer decomposition. Thermal decomposition is dependent on time and temperature.
Stability	: This material is considered stable. Product will not undergo polymerization.
Materials To Avoid	: Avoid contact with acids, alkalies and strong oxidizing agents.
Hazardous Reactions/ Decomposition Products	: Thermal decomposition may yield acrylic monomers.

11. Toxicological Information

Acute Toxicity	Component: Glycols
	Oral LD ₅₀ >10,000 mg/kg(rat) Dermal LD ₅₀ >10,000 mg/kg(rabbit) Inhalant LC ₅₀
Eye Irritation	Component: Modified Carbon black
	Oral LD ₅₀ > 5,000 mg/kg(rabbit) Dermal LD ₅₀ 1 h 27,000 mg/l(rat) Inhalant LC ₅₀
Skin Irritation	: Not available
Sensitization	: rabbit slight irritation
Mutagenicity	: Patch test on human volunteers did not demonstrate sensitization properties.
Carcinogenicity	: Not available : Modified Carbon black ACGIH: Not classifiable as a human carcinogen. IARC: Possible carcinogen. US CA CRT: Carcinogenic. NIOSH Potentially carcinogenic.

12. Ecological Information

Handling is noted because it might influence the environment when leaking and abandoning it.

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Especially, note that the product doesn't flow directly to ground, the river, and the drain ditch.

Ecotoxicity : Toxicity to fish
LC50 100 mg/l

Toxicity to aquatic invertebrates
EC50 Daphnia magna 100 mg/l

Persistence And : Not available

Degradability

Bioaccumulative : Not available

Potential

Other Adverse Effects : Not available

13. Disposal Considerations

When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or 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).

Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.
Do not dump this product into sewers, on the ground or into any body of water.

14. Transport Information

Check a thing without a leak in a container.

Perform prevention of collapse of cargo surely.

UN Class/UN Number: Not applicable

DOT, IMO/IMDG : Not regulated

Transportation classification may vary by container volume and may be influenced by regional or country variations in regulations.

15. Regulatory Information

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

TSCA Status : All components of this product are in compliance with the inventory

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listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Cerclé Reportable : **Not Applicable**

Quantity
(40 CFR 117, 302)

SARA Title III

Section 302
(40 CFR 355)

Section 311/312 : Chronic Health Hazard
(40 CFR 370) Acute Health Hazard

Section 313 : This product does not contain a chemical which is listed in Section
(40 CFR 372) 313 at or above de minimis concentrations.

CERCLA : Releases of this material to air, land, or water are not reportable to
(40 CFR 302.4) 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.

Pennsylvania : The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components:

Formaldehyde

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 3, 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 : This product contains trace levels of a component or components
(Proposition 65) known to the state of California to cause cancer:

Components:

Ethyl acrylate 140-88-5

Formaldehyde 50-00-0

Others : This product is a 'controlled product' under the Canadian Workplace Hazardous Materials Information System (WHMIS).
Please refer to any other federal, state and local regulations.

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16. Other Information

This information is furnished without warranty, express or implied, except that it is accurate to the best knowledge of Mimaki Engineering Corporation.

It relates only to the specific material designated herein, and does not relate to use in combination with any other material or process.

Mimaki Engineering Corporation assumes no legal responsibility for use or reliance upon this information.

Revision history

Version	Date	Content
1.00	Oct 18, 2007	First issue
2.00	Jun 13, 2008	No.9 VOC