MUTOH

Chronic Health Hazards: None known

Mugtagenicity: None known

Carcinogenicity:

Black With excessive exposure, carbon black has been listed as a possible human carcinogen. However, as engineered within this ink cartridge, emissions to air of carbon black during normal printing use have not been found. IARC, the International Agency for Research on Cancer, has found printing inks to be not classifiable as human carcinogens.

Other None known

Toxicity Data:

Oral LD_{50} :	No data available
Dermal LD_{50} :	No data available
Inhalant LC_{50} :	No data available
OSHA Regulated :	Not established

*Analogical inference from material data

Eye irritating: *Mildly or serious irritating**

Skin irritating: *Minimally or mildly irritating**

Skin sensitizing: *No data available*

12. Ecological information

No data available on the adverse effects of this material on the environment

13. Disposal considerations

Used and unused cartridges are not federal RCRA hazardous waste. Disposal should be in accordance with federal state, and local requirements.

14. Transport information

No regulated as Hazardous material

15. Regulatory information

US information: Not regulated
EU information: Not regulated

16. Other information

This “Material Safety Data Sheet” contains health, safety, and environmental information. It does not replace any precautionary language or use and disposal information which accompanies the product. The information contained herein is believed to be accurate at the time of preparation, but should only be used as a guide. It is subject to revision from time to time. MUTOH do not warrant the completeness or accuracy of the information contained herein.

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Material Safety Data Sheet

1. Article and Corporate Identification

1.1. Identification of the product :

Eco Solvent Plus Ink

1.2. Company/undertaking identification :

Company name : MUTOH INDUSTRIES LTD.

Address : 3128 Shimosuwa-machi
Suwa-gun Nagano-ken 393-8585
JAPAN

Phone : +81-266-28-9736
Fax : +81-266-28-7760
Contact person : N.Saeki / Quality Assurance Division

2. Composition/information on ingredients

These are solvent ink formulations.

Black:

Ink Composition	CAS No.	% By Weight
Carbon black	1333-86-4	1 - 5%
Dipropylene glycol mono-methyl ether	34590-94-8	15 – 25%
Proprietary organic materials	-	balance

Yellow, Magenta & Light Magenta, Cyan & Light Cyan:

Ink Composition	CAS No.	% By Weight
Proprietary pigment	-	1 - 5%
Dipropylene glycol mono-methyl ether	34590-94-8	15 – 25%
Proprietary organic materials	-	balance

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3. Hazards identification

3.1. Emergency Overview:

Ink component is a coloured liquid that may cause eye, nose and throat irritation. If inhaled it may cause unconsciousness.
Avoid contact with eyes or clothing.
In the case of skin contact, wash with soap and water.
Keep out of reach of children.

3.2 Potential Health Effects:

Eyes : Ink contact with eye will irritating. See Section 11 for Toxicology.

Skin : Ink contact with skin may cause minimal irritation. See Section 11 for Toxicology.

Inhalation: Intentional exposure to ink vapors (mist) may cause respiratory irritation and unconsciousness. See Section 11 for Toxicology.

Ingestion: May cause upset stomach. See Section 11 for Toxicology.

4. First-aid measures

4.1. Eyes:

Immediately flush with room temperature, low pressure, clean water for at least 15 minutes.
Seek medical attention if eye irritation continues.

4.2. Skin:

Wash surface areas with soap and water. Wash soiled clothing before rewearing.
Consult a physician if irritation continues.

4.3. Inhalation:

Remove subject to ventilated fresh air. If not breathing, give artificial respiration right away.
If breathing is difficult, give oxygen. Seek immediate medical attention.

4.4. Ingestion:

Seek medical advice; and attention if stomach continues to be upset.

5. Fire-fighting measures

5.1. Flammability:

Combustible liquid. See Section 9 for Flash Point

5.2. Extinguishing Media:

Water spray, dry chemical, carbon dioxide, or alcohol foam

5.3. Fire Fighting Instructions:

Extinguish to use fire fighting media or plentiful fog water.
Put protection wear without fail in case of fire fighting work; do not work in the leeward.

6. Accidental release measures

Remove the person of the leeward. Keep away the person from periphery of the place of the leakage. Remove the ignition promptly. Put protection wear without fail in case of work; do not work in the leeward. Ventilate sufficiently during clean-up in case of inside of a house. Use sponges to wipe-up ink, then rinse area with damp cloth. Place waste in closed container for disposal. Do not dispose of waste to the sewer. Wash hands with soap and water.

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7. Precautions for safe handling and use

Keep out of reach of children and do not drink ink.
Use proper ventilation and no fire in work place.
Do not store the cartridge in high or freezing temperatures. Keep cartridge out of direct sunlight.
Do not dismantle cartridge. Do not store cartridges with oxidizing agents or explosives. Make sure cartridge is dry before insertion into printer housing.

8. Exposure controls/personal protection

8.1. Engineering Controls:

Proper ventilation

8.2. Exposure Controls:

Not established

8.3. Personal Protection:

Not required under suitable use as setting the cartridge on the printer

9. Physical and chemical properties

Appearance :	Coloured liquid
Odor :	Slightly
pH :	Not applicable
Boiling point :	No data available
Melting point :	No data available
Flashing point :	About 71°C (Closed up)
Autoflammability :	None
Explosive properties :	1.1 to 14v/v% as dipropylene glycol mono-methyl ether
Oxidizing properties :	None
Vapor pressure :	Greater than 1 (air = 1)
Relative density :	No data available
Solubility in water :	Soluble
Solubility in fat :	No data available
Partition coefficient :	No data available
Viscosity :	No data available

10. Stability and reactivity

Stability :	Stable under normal temperature
Hazardous polymerization :	No data available
Hazardous decomposition products :	No data available
Incompatible materials :	Oxidizers and explosives

11. Toxicology and health hazards

Routes Of Overexposure: Eye, skin, inhalation, and oral

Acute Health Hazards:

- Overexposure of eye surface to ink may be mildly irritating
- Overexposure of skin to ink contact may cause irritation and in some people swelling and redness
- Intentional inhalation overexposure to ink vapors may result in respiratory tract irritation and anesthesia
- Intentional or accidental oral ingestion may cause an upset stomach