

## Safety Data Sheet

In accordance with OSHA HCS 1910.1200

### 1. Identification

Product identifier: Eco Solvent Ultra Black VJ-MSINK3A-Bk220/440/1000  
 Recommended use of the chemical and restrictions on use: Inkjet Printing  
 Supplier's details  
 Name: MUTOH America Inc.  
 Address: 2602 South 47th Street, Suite 102, Phoenix, AZ 85034  
 Contact section: Customer Care  
 Telephone number: 480-968-7772  
 Emergency phone number: 480-968-7772 (During normal opening times)

### 2. Hazards Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Physical Hazards	FLAMMABLE LIQUID	Category 4
Health Hazards	SERIOUS EYE DAMAGE /EYE IRRITATION	Category 2B
Environmental Hazards	Not classified	

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200;

Symbols:	None
Signal word	Warning
Hazard Statements	Combustible liquid Causes eye irritation

Precautionary Statements

[Prevention]	Keep away from flames and hot surfaces. -No smoking. Wash hands thoroughly after handling.
[Response]	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. In case of fire: Use water spray, dry chemical, carbon dioxide or alcohol foam to extinguish.
[Storage]	Store in a well-ventilated place. Keep cool.
[Disposal]	Dispose of contents/ container in accordance with related laws and local/ regional regulations.

Description of any hazards not otherwise classified;  
 Ink contact with skin may cause irritation, swelling or redness.

### 3. Composition/Information on Ingredients

Information on ingredients:

Chemical name	CAS No.	Concentration (wt %)
Diethylene glycol diethyl ether	112-36-7	55-65
Tetraethylene glycol dimethyl ether	143-24-8	10-20
Gamma-butyrolactone	96-48-0	<20
Proprietary organic materials	Trade secret	1-10
Tetraethylene glycol monobutyl ether	1559-34-8	1-5
Carbon black	1333-86-4	1-5

### 4. First Aid Measures

Description of first aid measures

Eyes:	Immediately flush with room temperature, low pressure and clean water for at least 15 minutes. Seek medical attention if eye irritation continues.
Skin:	Wash surface areas with soap and water. Wash soiled clothing before rewearing. Consult a physician if irritation continues.
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.
Ingestion:	Seek medical advice; and attention if stomach continues to be upset.

Most important symptoms/effects, acute and delayed:  
 Skin: Ink contact with skin may cause irritation, swelling or redness.

Indication of immediate medical attention and special treatment needed, if necessary: Not necessary

### 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, dry chemical, carbon dioxide or, alcohol foam
Unsuitable extinguishing media:	None
Specific hazards arising from the chemical:	None
Special protective equipment and precautions for fire-fighters:	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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:	Eye or Skin protection required during clean-up. Use proper ventilation.
For emergency responders:	None

Environmental precautions: Do not release to sewer, surface-or ground-water.

Methods and material for containment and cleaning up

Advice on how to contain a spill: Use sponges to wipe-up ink.  
 Advice how to clean-up a spill: Rinse area with damp cloth. Place waste in closed container for disposal.  
 Wash hands with soap and water.  
 Any other information: Do not dispose of waste to the sewer.  
 Reference to other sections: None

## 7. Handling And Storage

Precautions for safe handling

Recommendations: Use proper ventilation and no fire in work place. Keep out of reach of children and do not drink ink.  
 Do not dismantle cartridge.  
 Advice on general occupational hygiene: Avoid contact with eyes or clothing.  
 In the case of skin contact, wash with soap and water.  
 Conditions for safe storage, including any incompatibilities:  
 Do not store the cartridge in high or freezing temperatures.  
 Keep cartridge out of direct sunlight.  
 Do not store the cartridge with oxidizing agents or explosives.  
 Make sure cartridge is dry before insertion into printer housing.  
 Specific end use(s): Not specified.

## 8. Exposure controls/personal protection

Control parameters: Diethylen glycol diethyl ether(CAS No.112-36-7)  
 California OELs(California Code of Regulations,Title 8,Section5155.Airborne Contaminants)  
 The 8-Hour TWA Exposure Value:5 ppm  
 The 8-Hour TWA Exposure Value:33mg/m<sup>3</sup>  
 Appropriate engineering controls: Proper ventilation, in prevention  
 Individual protection measures, such as personal protective equipment  
 Use of personal protective equipment: Not required under suitable use as setting the cartridge on the printer.  
 Detailed specification on equipment to provide adequate and suitable protection  
 (a) eye/face protection: Not required under suitable use as setting the cartridge on the printer.  
 (b) skin protection: hand protection & others:  
 Not required under suitable use as setting the cartridge on the printer.  
 (c) respiratory protection: Not required under suitable use as setting the cartridge on the printer.  
 (d) thermal hazards: Not required under suitable use as setting the cartridge on the printer.  
 Environmental exposure controls: Not established

## 9. Physical and Chemical Properties

Information on basic physical and chemical properties:

Appearance: Black liquid  
 Odor: Slightly  
 Odour threshold: No data available  
 pH: No data available  
 Melting point/ freezing point: No data available  
 Initial boiling point and boiling range: No data available  
 Flash point: about 71°C (Closed cup)  
 Evaporation rate: No data available  
 Flammability(solid,gas): Not applicable (liquid)  
 Upper/lower flammability or explosive limits: No data available  
 Vapor pressure: No data available  
 Vapor density: Greater than 1 (air=1)  
 Relative density: No data available  
 Solubility(ies): Soluble  
 Partition coefficient:n-octanol/water: No data available  
 Auto-ignition temperature: No data available  
 Decomposition temperature: No data available  
 Viscosity: No data available  
 Explosive properties: Explosive limits:1.4-6.9v/v% as Gamma-butyrolactone  
 Oxidizing properties: None  
 Other information: None

## 10. Stability and Reactivity

Reactivity: Stable under normal temperature  
 Chemical stability: Stable under normal temperature  
 Possibility of hazardous reactions: None  
 Conditions to avoid: High and freezing temperatures  
 Incompatible materials: Oxidizers and explosives  
 Hazardous decomposition products: No data available

## 11. Toxicological Information

Information on toxicological effects:

Acute toxicity: Oral LD50: > 2500 mg/kg (Rat)  
 Dermal LD50: > 2000 mg/kg (Rat)

Skin corrosion/irritation:	Mild irritant (Rabbit, OECD 404)
Serious eye damage /eye irritation:	Moderate irritant (Rabbit, OECD 405)
Skin sensitization:	Non-sensitizer (LLNA, OECD 429)
Germ cell mutagenicity:	Negative (by Ames Test)
Carcinogenicity:	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 as group 3.
Reproductive toxicity	No data available
STOT-Single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard	No data available

## 12. Ecological Information

Toxicity:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Other adverse effects:	No data available

## 13. Disposal Considerations

Waste treatment methods: Disposal should be in accordance with federal, state, and local requirements.

## 14. Transport Information

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable

## 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the product in question:

US Information:

TSCA Section 4(a) Final Test Rules Regulated:	Not regulated
TSCA Section 5 Significant New Use Rule Regulation:	Proposed
Ingredient:	Diethylene glycol diethyl ether CAS Number 112-36-7
Reference:	76FR40850
Ingredient:	Tetraethylene glycol dimethyl ethe CAS Number 143-24-8
Reference:	76ER40850
TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR):	Not regulated
TSCA Section 12(b) One-Time Export Notification Regulated:	
Ingredient:	Diethylene glycol diethyl ether CAS Number 112-36-7
Regulation:	TSCA 5 Proposed SUNR
Ingredient:	Tetraethylene glycol dimethyl ethe CAS Number 143-24-8
Regulation:	TSCA 5 Proposed SUNR
Clean Air Act Section 112, Hazardous Air Pollutants:	Diethylene glycol diethyl ether CAS Number 112-36-7
EPCRA (SARA Title III) Section 313:	Diethylene glycol diethyl ether CAS Number 112-36-7
NFPA/HMIS Hazard Rating :	Health (1), Flammability (2), Instability/Reactivity (0), Other (0)
California Proposition 65:	Not regulated

Canada Information:

WHMIS Controlled Product:	Not applicable(Manufactured article)
Chemical safety assessment:	This ink has not carried out any Chemical Safety Assessment yet.

## 16. Other Information

Update history:

Date of issue: 13.06.2013

This "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 does not warrant the completeness or accuracy of the information contained herein.

## Safety Data Sheet

In accordance with OSHA HCS 1910.1200

### 1. Identification

Product identifier: Eco Solvent Ultra Cyan VJ-MSINK3A-CY220/440/1000  
 Recommended use of the chemical and restrictions on use: Inkjet Printing  
 Supplier's details  
 Name: MUTOH America Inc.  
 Address: 2602 South 47th Street, Suite 102, Phoenix, AZ 85034  
 Contact section: Customer Care  
 Telephone number: 480-968-7772  
 Emergency phone number: 480-968-7772 (During normal opening times)

### 2. Hazards Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Physical Hazards FLAMMABLE LIQUID Category 4  
 Health Hazards Not classified  
 Environmental Hazards Not classified

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200;

Symbols: None  
 Signal word Warning  
 Hazard Statements Combustible liquid  
 Causes eye irritation

Precautionary Statements

[Prevention] Keep away from flames and hot surfaces. -No smoking.  
 Wash hands thoroughly after handling.  
 [Storage] Store in a well-ventilated place. Keep cool.  
 [Disposal] Dispose of contents/ container in accordance with related laws and local/ regional regulations.

Description of any hazards not otherwise classified;

Ink contact with skin may cause irritation, swelling or redness.

### 3. Composition/Information on Ingredients

Information on ingredients:

Chemical name	CAS No.	Concentration (wt %)
Diethylene glycol diethyl ether	112-36-7	55-65
Tetraethylene glycol dimethyl ether	143-24-8	10-20
Gamma-butyrolactone	96-48-0	<20
Proprietary organic materials	Trade secret	1-10
Tetraethylene glycol monobutyl ether	1559-34-8	1-5
Colorant	Trade secret	1-5

### 4. First Aid Measures

Description of first aid measures

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

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

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.

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

Most important symptoms/effects, acute and delayed:

Skin: Ink contact with skin may cause irritation, swelling or redness.

Indication of immediate medical attention and special treatment needed, if necessary: Not necessary

### 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, dry chemical, carbon dioxide or, alcohol foam

Unsuitable extinguishing media: None

Specific hazards arising from the chemical: None

Special protective equipment and precautions for fire-fighters: 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Eye or Skin protection required during clean-up. Use proper ventilation.

For emergency responders: None

Environmental precautions: Do not release to sewer, surface-or ground-water.

Methods and material for containment and cleaning up

Advice on how to contain a spill: Use sponges to wipe-up ink.

Advice how to clean-up a spill: Rinse area with damp cloth. Place waste in closed container for disposal.  
 Wash hands with soap and water.

Any other information: Do not dispose of waste to the sewer.  
 Reference to other sections: None

## 7. Handling And Storage

Precautions for safe handling

Recommendations: Use proper ventilation and no fire in work place. Keep out of reach of children and do not drink ink.  
 Do not dismantle cartridge.  
 Advice on general occupational hygiene: Avoid contact with eyes or clothing.  
 In the case of skin contact, wash with soap and water.  
 Conditions for safe storage, including any incompatibilities:  
 Do not store the cartridge in high or freezing temperatures.  
 Keep cartridge out of direct sunlight.  
 Do not store the cartridge with oxidizing agents or explosives.  
 Make sure cartridge is dry before insertion into printer housing.  
 Specific end use(s): Not specified.

## 8. Exposure controls/personal protection

Control parameters: Diethylen glycol diethyl ether(CAS No.112-36-7)  
 California OELs(California Code of Regulations, Title 8, Section 5155. Airborne Contaminants)  
 The 8-Hour TWA Exposure Value: 5 ppm  
 The 8-Hour TWA Exposure Value: 33 mg/m<sup>3</sup>  
 Appropriate engineering controls: Proper ventilation, in prevention  
 Individual protection measures, such as personal protective equipment  
 Use of personal protective equipment: Not required under suitable use as setting the cartridge on the printer.  
 Detailed specification on equipment to provide adequate and suitable protection  
 (a) eye/face protection: Not required under suitable use as setting the cartridge on the printer.  
 (b) skin protection: hand protection & others:  
 Not required under suitable use as setting the cartridge on the printer.  
 (c) respiratory protection: Not required under suitable use as setting the cartridge on the printer.  
 (d) thermal hazards: Not required under suitable use as setting the cartridge on the printer.  
 Environmental exposure controls: Not established

## 9. Physical and Chemical Properties

Information on basic physical and chemical properties:

Appearance: Cyan liquid  
 Odor: Slightly  
 Odour threshold: No data available  
 pH: No data available  
 Melting point/ freezing point: No data available  
 Initial boiling point and boiling range: No data available  
 Flash point: about 71°C (Closed cup)  
 Evaporation rate: No data available  
 Flammability(solid, gas): Not applicable (liquid)  
 Upper/lower flammability or explosive limits: No data available  
 Vapor pressure: No data available  
 Vapor density: Greater than 1 (air=1)  
 Relative density: No data available  
 Solubility(ies): Soluble  
 Partition coefficient:n-octanol/water: No data available  
 Auto-ignition temperature: No data available  
 Decomposition temperature: No data available  
 Viscosity: No data available  
 Explosive properties: Explosive limits: 1.4-6.9v/v% as Gamma-butyrolactone  
 Oxidizing properties: None  
 Other information: None

## 10. Stability and Reactivity

Reactivity: Stable under normal temperature  
 Chemical stability: Stable under normal temperature  
 Possibility of hazardous reactions: None  
 Conditions to avoid: High and freezing temperatures  
 Incompatible materials: Oxidizers and explosives  
 Hazardous decomposition products: No data available

## 11. Toxicological Information

Information on toxicological effects:

Acute toxicity: Oral LD50: > 2500 mg/kg (Rat)  
 Dermal LD50: > 2000 mg/kg (Rat)  
 Skin corrosion/irritation: Mild irritant (Rabbit, OECD 404)  
 Serious eye damage /eye irritation: Mild irritant (Rabbit, OECD 405)  
 Skin sensitization: Non-sensitizer (LLNA, OECD 429)

Germ cell mutagenicity:	Negative (by Ames Test)
Carcinogenicity:	Not contain any substances listed in IARC Monographs (1,2A and 2B)
Reproductive toxicity	No data available
STOT-Single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard	No data available

**12. Ecological Information**

Toxicity:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Other adverse effects:	No data available

**13. Disposal Considerations**

Waste treatment methods: Disposal should be in accordance with federal, state, and local requirements.

**14. Transport Information**

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable

**15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the product in question:

US Information:

TSCA Section 4(a) Final Test Rules Regulated:	Not regulated
TSCA Section 5 Significant New Use Rule Regulation:	Proposed
Ingredient:	Diethylene glycol diethyl ether CAS Number 112-36-7
Reference:	76FR40850
Ingredient:	Tetraethylene glycol dimethyl ethe CAS Number 143-24-8
Reference:	76ER40850
TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR):	Not regulated
TSCA Section 12(b) One-Time Export Notification Regulated:	
Ingredient:	Diethylene glycol diethyl ether CAS Number 112-36-7
Regulation:	TSCA 5 Proposed SNUR
Ingredient:	Tetraethylene glycol dimethyl ethe CAS Number 143-24-8
Regulation:	TSCA 5 Proposed SNUR
Clean Air Act Section 112, Hazardous Air Pollutants:	Diethylene glycol diethyl ether CAS Number 112-36-7
EPCRA (SARA Title III) Section 313:	Diethylene glycol diethyl ether CAS Number 112-36-7
NFPA/HMIS Hazard Rating :	Health (1), Flammability (2), Instability/Reactivity (0), Other (0)
California Proposition 65:	Not regulated

Canada Information:

WHMIS Controlled Product:	Not applicable(Manufactured article)
Chemical safety assessment:	This ink has not carried out any Chemical Safety Assessment yet.

**16. Other Information**

Update history:

Date of issue: 13.06.2013

This "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 does not warrant the completeness or accuracy of the information contained herein.

## Safety Data Sheet

In accordance with OSHA HCS 1910.1200

### 1. Identification

Product identifier: Eco Solvent Ultra Magenta VJ-MSINK3A-MA220/440/1000  
 Recommended use of the chemical and restrictions on use: Inkjet Printing  
 Supplier's details  
 Name: MUTOH America Inc.  
 Address: 2602 South 47th Street, Suite 102, Phoenix, AZ 85034  
 Contact section: Customer Care  
 Telephone number: 480-968-7772  
 Emergency phone number: 480-968-7772 (During normal opening times)

### 2. Hazards Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Physical Hazards FLAMMABLE LIQUID Category 4  
 Health Hazards Not classified  
 Environmental Hazards Not classified

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200;

Symbols: None  
 Signal word Warning  
 Hazard Statements Combustible liquid  
 Causes eye irritation

Precautionary Statements

[Prevention] Keep away from flames and hot surfaces. -No smoking.  
 Wash hands thoroughly after handling.  
 [Storage] Store in a well-ventilated place. Keep cool.  
 [Disposal] Dispose of contents/ container in accordance with related laws and local/ regional regulations.

Description of any hazards not otherwise classified;

Ink contact with skin may cause irritation, swelling or redness.

### 3. Composition/Information on Ingredients

Information on ingredients:

Chemical name	CAS No.	Concentration (wt %)
Diethylene glycol diethyl ether	112-36-7	55-65
Tetraethylene glycol dimethyl ether	143-24-8	10-20
Gamma-butyrolactone	96-48-0	<20
Proprietary organic materials	Trade secret	1-10
Tetraethylene glycol monobutyl ether	1559-34-8	1-5
Colorant	Trade secret	1-5

### 4. First Aid Measures

Description of first aid measures

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

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

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.

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

Most important symptoms/effects, acute and delayed:

Skin: Ink contact with skin may cause irritation, swelling or redness.

Indication of immediate medical attention and special treatment needed, if necessary: Not necessary

### 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, dry chemical, carbon dioxide or, alcohol foam

Unsuitable extinguishing media: None

Specific hazards arising from the chemical: None

Special protective equipment and precautions for fire-fighters: 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Eye or Skin protection required during clean-up. Use proper ventilation.

For emergency responders: None

Environmental precautions: Do not release to sewer, surface-or ground-water.

Methods and material for containment and cleaning up

Advice on how to contain a spill: Use sponges to wipe-up ink.

Advice how to clean-up a spill: Rinse area with damp cloth. Place waste in closed container for disposal.  
 Wash hands with soap and water.

Any other information: Do not dispose of waste to the sewer.  
 Reference to other sections: None

## 7. Handling And Storage

Precautions for safe handling

Recommendations: Use proper ventilation and no fire in work place. Keep out of reach of children and do not drink ink.  
 Do not dismantle cartridge.  
 Advice on general occupational hygiene: Avoid contact with eyes or clothing.  
 In the case of skin contact, wash with soap and water.  
 Conditions for safe storage, including any incompatibilities:  
 Do not store the cartridge in high or freezing temperatures.  
 Keep cartridge out of direct sunlight.  
 Do not store the cartridge with oxidizing agents or explosives.  
 Make sure cartridge is dry before insertion into printer housing.  
 Specific end use(s): Not specified.

## 8. Exposure controls/personal protection

Control parameters: Diethylen glycol diethyl ether(CAS No.112-36-7)  
 California OELs(California Code of Regulations, Title 8, Section 5155. Airborne Contaminants)  
 The 8-Hour TWA Exposure Value: 5 ppm  
 The 8-Hour TWA Exposure Value: 33 mg/m<sup>3</sup>  
 Appropriate engineering controls: Proper ventilation, in prevention  
 Individual protection measures, such as personal protective equipment  
 Use of personal protective equipment: Not required under suitable use as setting the cartridge on the printer.  
 Detailed specification on equipment to provide adequate and suitable protection  
 (a) eye/face protection: Not required under suitable use as setting the cartridge on the printer.  
 (b) skin protection: hand protection & others:  
 Not required under suitable use as setting the cartridge on the printer.  
 (c) respiratory protection: Not required under suitable use as setting the cartridge on the printer.  
 (d) thermal hazards: Not required under suitable use as setting the cartridge on the printer.  
 Environmental exposure controls: Not established

## 9. Physical and Chemical Properties

Information on basic physical and chemical properties:

Appearance: Magenta liquid  
 Odor: Slightly  
 Odour threshold: No data available  
 pH: No data available  
 Melting point/ freezing point: No data available  
 Initial boiling point and boiling range: No data available  
 Flash point: about 71°C (Closed cup)  
 Evaporation rate: No data available  
 Flammability(solid, gas): Not applicable (liquid)  
 Upper/lower flammability or explosive limits: No data available  
 Vapor pressure: No data available  
 Vapor density: Greater than 1 (air=1)  
 Relative density: No data available  
 Solubility(ies): Soluble  
 Partition coefficient:n-octanol/water: No data available  
 Auto-ignition temperature: No data available  
 Decomposition temperature: No data available  
 Viscosity: No data available  
 Explosive properties: Explosive limits: 1.4-6.9v/v% as Gamma-butyrolactone  
 Oxidizing properties: None  
 Other information: None

## 10. Stability and Reactivity

Reactivity: Stable under normal temperature  
 Chemical stability: Stable under normal temperature  
 Possibility of hazardous reactions: None  
 Conditions to avoid: High and freezing temperatures  
 Incompatible materials: Oxidizers and explosives  
 Hazardous decomposition products: No data available

## 11. Toxicological Information

Information on toxicological effects:

Acute toxicity: Oral LD50: > 2500 mg/kg (Rat)  
 Dermal LD50: > 2000 mg/kg (Rat)  
 Skin corrosion/irritation: Mild irritant (Rabbit, OECD 404)  
 Serious eye damage /eye irritation: Mild irritant (Rabbit, OECD 405)  
 Skin sensitization: Non-sensitizer (LLNA, OECD 429)



Germ cell mutagenicity:	Negative (by Ames Test)
Carcinogenicity:	Not contain any substances listed in IARC Monographs (1,2A and 2B)
Reproductive toxicity	No data available
STOT-Single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard	No data available

**12. Ecological Information**

Toxicity:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Other adverse effects:	No data available

**13. Disposal Considerations**

Waste treatment methods: Disposal should be in accordance with federal, state, and local requirements.

**14. Transport Information**

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable

**15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the product in question:

US Information:

TSCA Section 4(a) Final Test Rules Regulated:	Not regulated
TSCA Section 5 Significant New Use Rule Regulation:	Proposed
Ingredient:	Diethylene glycol diethyl ether CAS Number 112-36-7
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Reference:	76ER40850
TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR):	Not regulated
TSCA Section 12(b) One-Time Export Notification Regulated:	
Ingredient:	Diethylene glycol diethyl ether CAS Number 112-36-7
Regulation:	TSCA 5 Proposed SNUR
Ingredient:	Tetraethylene glycol dimethyl ethe CAS Number 143-24-8
Regulation:	TSCA 5 Proposed SNUR
Clean Air Act Section 112, Hazardous Air Pollutants:	Diethylene glycol diethyl ether CAS Number 112-36-7
EPCRA (SARA Title III) Section 313:	Diethylene glycol diethyl ether CAS Number 112-36-7
NFPA/HMIS Hazard Rating :	Health (1), Flammability (2), Instability/Reactivity (0), Other (0)
California Proposition 65:	Not regulated

Canada Information:

WHMIS Controlled Product:	Not applicable(Manufactured article)
Chemical safety assessment:	This ink has not carried out any Chemical Safety Assessment yet.

**16. Other Information**

Update history:

Date of issue: 13.06.2013

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## Safety Data Sheet

In accordance with OSHA HCS 1910.1200

### 1. Identification

Product identifier: Eco Solvent Ultra Yellow VJ-MSINK3A-YE220/440/1000  
 Recommended use of the chemical and restrictions on use: Inkjet Printing  
 Supplier's details:  
 Name: MUTOH America Inc.  
 Address: 2602 South 47th Street, Suite 102, Phoenix, AZ 85034  
 Contact section: Customer Care  
 Telephone number: 480-968-7772  
 Emergency phone number: 480-968-7772 (During normal opening times)

### 2. Hazards Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Physical Hazards FLAMMABLE LIQUID Category 4  
 Health Hazards SERIOUS EYE DAMAGE /EYE IRRITATION Category 1  
 Environmental Hazards Not classified

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200;

Symbols:



Signal word Danger  
 Hazard Statements Combustible liquid  
 Causes serious eye damage

Precautionary Statements

[Prevention] Keep away from flames and hot surfaces. -No smoking.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 [Response] If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
 Continue rinsing.  
 Immediately call a poison center or doctor/physician.  
 [Storage] Store in a well-ventilated place. Keep cool.  
 [Disposal] Dispose of contents/ container in accordance with related laws and local/ regional regulations.

Description of any hazards not otherwise classified;

Ink contact with skin may cause irritation, swelling or redness.

### 3. Composition/Information on Ingredients

Information on ingredients:

Chemical name	CAS No.	Concentration (wt %)
Diethylene glycol diethyl ether	112-36-7	55-65
Tetraethylene glycol dimethyl ether	143-24-8	10-20
Gamma-butyrolactone	96-48-0	<20
Proprietary organic materials	Trade secret	1-10
Tetraethylene glycol monobutyl ether	1559-34-8	1-5
Colorant	Trade secret	1-5

### 4. First Aid Measures

Description of first aid measures

Eyes: Immediately flush with room temperature, low pressure and clean water for at least 15 minutes. Seek medical attention if eye irritation continues.  
 Skin: Wash surface areas with soap and water. Wash soiled clothing before rewearing. Consult a physician if irritation continues.  
 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.  
 Ingestion: Seek medical advice; and attention if stomach continues to be upset.

Most important symptoms/effects, acute and delayed:

Skin: Ink contact with skin may cause irritation, swelling or redness.

Indication of immediate medical attention and special treatment needed, if necessary: Not necessary

### 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, dry chemical, carbon dioxide or, alcohol foam  
 Unsuitable extinguishing media: None  
 Specific hazards arising from the chemical: None  
 Special protective equipment and precautions for fire-fighters: 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Eye or Skin protection required during clean-up. Use proper ventilation.

For emergency responders: None

Environmental precautions: Do not release to sewer, surface-or ground-water.

Methods and material for containment and cleaning up

Advice on how to contain a spill: Use sponges to wipe-up ink.

Advice how to clean-up a spill: Rinse area with damp cloth. Place waste in closed container for disposal.

Wash hands with soap and water.

Any other information: Do not dispose of waste to the sewer.

Reference to other sections: None

## 7. Handling And Storage

Precautions for safe handling

Recommendations: Use proper ventilation and no fire in work place. Keep out of reach of children and do not drink ink. Do not dismantle cartridge.

Advice on general Avoid contact with eyes or clothing.

occupational hygiene: In the case of skin contact, wash with soap and water.

Conditions for safe storage, including any incompatibilities:

Do not store the cartridge in high or freezing temperatures.

Keep cartridge out of direct sunlight.

Do not store the cartridge with oxidizing agents or explosives.

Make sure cartridge is dry before insertion into printer housing.

Specific end use(s): Not specified.

## 8. Exposure Controls and Personal Protection

Control parameters: Diethylen glycol diethyl ether(CAS No.112-36-7)

California OELs(California Code of Regulations,Title 8,Section5155.Airborne Contaminants)

The 8-Hour TWA Exposure Value:5 ppm

The 8-Hour TWA Exposure Value:33mg/m<sup>3</sup>

Appropriate engineering controls: Proper ventilation, in prevention

Individual protection measures, such as personal protective equipment

Use of personal protective equipment: Not required under suitable use as setting the cartridge on the printer.

Detailed specification on equipment to provide adequate and suitable protection

(a) eye/face protection: Not required under suitable use as setting the cartridge on the printer.

(b) skin protection: hand protection & others:

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

(c) respiratory protection: Not required under suitable use as setting the cartridge on the printer.

(d) thermal hazards: Not required under suitable use as setting the cartridge on the printer.

Environmental exposure controls: Not established

## 9. Physical and Chemical Properties of Ink Formulation

Information on basic physical and chemical properties:

Appearance: Yellow liquid

Odor: Slightly

Odour threshold: No data available

pH: No data available

Melting point/ freezing point: No data available

Initial boiling point and boiling range: No data available

Flash point: about 71°C (Closed cup)

Evaporation rate: No data available

Flammability(solid,gas): Not applicable (liquid)

Upper/lower flammability or explosive limits: No data available

Vapor pressure: No data available

Vapor density: Greater than 1 (air=1)

Relative density: No data available

Solubility(ies): Soluble

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

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: Explosive limits:1.4-6.9v/v% as Gamma-butyrolactone

Oxidizing properties: None

Other information: None

## 10. Stability and Reactivity

Reactivity: Stable under normal temperature

Chemical stability: Stable under normal temperature

Possibility of hazardous reactions: None

Conditions to avoid: High and freezing temperatures

Incompatible materials: Oxidizers and explosives  
 Hazardous decomposition products: No data available

## 11. Toxicological Information

Information on toxicological effects:

Acute toxicity:	Oral LD50: > 2500 mg/kg (Rat)
	Dermal LD50: > 2000 mg/kg (Rat)
Skin corrosion/irritation:	Mild irritant (Rabbit, OECD 404)
Serious eye damage /eye irritation:	Corrosive effects (Rabbit, OECD 405)
Skin sensitization:	Non-sensitizer (LLNA, OECD 429)
Germ cell mutagenicity:	Negative (by Ames Test)
Carcinogenicity:	Contains Nickel compounds
	IARC: Group 1
	NTP: Known to be human carcinogen
	Proposition 65: Known to cause cancer
Reproductive toxicity	No data available
STOT-Single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard	No data available

## 12. Ecological Information

Toxicity:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Other adverse effects:	No data available

## 13. Disposal Considerations

Waste treatment methods: Disposal should be in accordance with federal, state, and local requirements.

## 14. Transport Information

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable

## 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the product in question:

US Information:

TSCA Section 4(a) Final Test Rules Regulated:	Not regulated
TSCA Section 5 Significant New Use Rule Regulation:	Proposed
Ingredient:	Diethylene glycol diethyl ether CAS Number 112-36-7
Reference:	76FR40850
Ingredient:	Tetraethylene glycol dimethyl ether CAS Number 143-24-8
Reference:	76ER40850
TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR):	Not regulated
TSCA Section 12(b) One-Time Export Notification Regulated:	
Ingredient:	Diethylene glycol diethyl ether CAS Number 112-36-7
Regulation:	TSCA 5 Proposed SNUR
Ingredient:	Tetraethylene glycol dimethyl ether CAS Number 143-24-8
Regulation:	TSCA 5 Proposed SNUR
Clean Air Act Section 112, Hazardous Air Pollutants:	Diethylene glycol diethyl ether CAS Number 112-36-7
EPCRA (SARA Title III) Section 313:	Diethylene glycol diethyl ether CAS Number 112-36-7
NFPA/HMIS Hazard Rating :	Health (1), Flammability (2), Instability/Reactivity (0), Other (0)
California Proposition 65:	“WARNING: This product contains a chemical known to the State of California to cause cancer.”

Canada Information:

WHMIS Controlled Product:	Not applicable(Manufactured article)
Chemical safety assessment:	This ink has not carried out any Chemical Safety Assessment yet.

## 16. Other Information

Update history:

Date of issue: 13.06.2013

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 does not warrant the completeness or accuracy of the information contained herein.

## Safety Data Sheet

In accordance with OSHA HCS 1910.1200

### 1. Identification

Product identifier: Eco Solvent Ultra Cleaner VJ-MSINK3-CL220/1000  
 Recommended use of the chemical and restrictions on use: Inkjet Printing  
 Manufacturer's details  
 Name: MUTOH America Inc.  
 Address: 2602 South 47th Street, Suite 102, Phoenix, AZ 85034  
 Contact section: Customer Care  
 Telephone number: 480-968-7772  
 Emergency phone number: 480-968-7772 (During normal opening times)

### 2. Hazards Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Physical Hazards FLAMMABLE LIQUID Category 4  
 Health Hazards Not classified  
 Environmental Hazards Not classified

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200;

Symbols: None  
 Signal word Warning  
 Hazard Statements Combustible liquid

Precautionary Statements

[Prevention] Keep away from flames and hot surfaces. -No smoking.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 [Storage] Store in a well-ventilated place. Keep cool.  
 [Disposal] Dispose of contents/ container in accordance with related laws and local/ regional regulations.

Description of any hazards not otherwise classified;

Ink contact with skin may cause irritation, swelling or redness.

### 3. Composition/Information on Ingredients

Information on ingredients:

Chemical name	CAS No.	Concentration (wt %)
Dipropylene glycol monomethyl ether	34590-94-8	40 - 50
Diethylene glycol diethyl ether	112-36-7	40 - 50
Triethylene glycol monomethyl ether	112-35-6	20 - 30

### 4. First Aid Measures

Description of first aid measures

Eyes: Immediately flush with room temperature, low pressure and clean water for at least 15 minutes. Seek medical attention if eye irritation continues.  
 Skin: Wash surface areas with soap and water. Wash soiled clothing before rewearing. Consult a physician if irritation continues.  
 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.  
 Ingestion: Seek medical advice; and attention if stomach continues to be upset.

Most important symptoms/effects, acute and delayed:

None

Indication of immediate medical attention and special treatment needed, if necessary: Not necessary

### 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, dry chemical, carbon dioxide or, alcohol foam

Unsuitable extinguishing media: None

Specific hazards arising from the chemical: None

Special protective equipment and precautions for fire-fighters: 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Eye or Skin protection required during clean-up. Use proper ventilation.

For emergency responders: None

Environmental precautions: Do not release to sewer, surface-or ground-water.

Methods and material for containment and cleaning up

Advice on how to contain a spill: Use sponges to wipe-up ink.

Advice how to clean-up a spill: Rinse area with damp cloth. Place waste in closed container for disposal.

Wash hands with soap and water.

Any other information: Do not dispose of waste to the sewer.

Reference to other sections: None

## 7. Handling And Storage

### Precautions for safe handling

Recommendations:	Use proper ventilation and no fire in work place. Keep out of reach of children and do not drink ink. Do not dismantle cartridge.
Advice on general occupational hygiene:	Avoid contact with eyes or clothing. In the case of skin contact, wash with soap and water.
Conditions for safe storage, including any incompatibilities:	Do not store the cartridge in high or freezing temperatures. Keep cartridge out of direct sunlight. Do not store the cartridge with oxidizing agents or explosives. Make sure cartridge is dry before insertion into printer housing.
Specific end use(s):	Not specified.

## 8. Exposure controls/personal protection

### Control parameters:

### Exposure limit values:

Substance(s)	ACGIH: TLV	USA OSHA: PEL
Dipropylene glycol monomethyl ether (CAS No. 34590-94-8)	TWA: 100ppm STEL: 150ppm	TWA: 600mg/m <sup>3</sup> , 100ppm STEL: 900mg/m <sup>3</sup> , 150ppm

Dipropylene glycol monomethyl ether (CAS No. 34590-94-8)

California OELs (California Code of Regulations, Title 8, Section 5155. Airborne Contaminants)

The 8-Hour TWA Exposure Value: 100 ppm

The 8-Hour TWA Exposure Value: 600 mg/m<sup>3</sup>

Diethylen glycol diethyl ether(CAS No.112-36-7)

California OELs(California Code of Regulations,Title 8,Section5155.Airborne Contaminants)

The 8-Hour TWA Exposure Value:5 ppm

The 8-Hour TWA Exposure Value:33mg/m<sup>3</sup>

Appropriate engineering controls: Proper ventilation, in prevention

Individual protection measures, such as personal protective equipment

Use of personal protective equipment: Not required under suitable use as setting the cartridge on the printer.

Detailed specification on equipment to provide adequate and suitable protection

(a) eye/face protection: Not required under suitable use as setting the cartridge on the printer.

(b) skin protection: hand protection & others:

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

(c) respiratory protection: Not required under suitable use as setting the cartridge on the printer.

(d) thermal hazards: Not required under suitable use as setting the cartridge on the printer.

Environmental exposure controls: Not established

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties:

Appearance:	Clear Liquid
Odor:	Slightly
Odour threshold:	No data available
pH:	No data available
Melting point/ freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	about 76°C (Closed cup)
Evaporation rate:	No data available
Flammability(solid,gas):	Not applicable (liquid)
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	Greater than 1 (air=1)
Relative density:	No data available
Solubility(ies):	Soluble
Partition coefficient:n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	Explosive limits:1.1~1.4v/v% as Dipropylene glycol monomethyl ether
Oxidizing properties:	None
Other information	None

## 10. Stability and Reactivity

Reactivity:	Stable under normal temperature
Chemical stability:	Stable under normal temperature
Possibility of hazardous reactions:	None

Conditions to avoid: High and freezing temperatures  
Incompatible materials: Oxidizers and explosives  
Hazardous decomposition products: No data available

## 11. Toxicological Information

Information on toxicological effects:

Acute toxicity:	Oral LD50: > 2500 mg/kg (Rat) Dermal LD50: > 2000 mg/kg (Rat)
Skin corrosion/irritation:	Mild irritant (Rabbit, OECD 404)
Serious eye damage /eye irritation:	Mild irritant (Rabbit, OECD 405)
Skin sensitization:	Non-sensitiser (Guinea pig, OECD 406)
Germ cell mutagenicity:	Negative (by Ames Test)
Carcinogenicity:	Not contain any substances listed in IARC Monographs (1,2A and 2B)
Reproductive toxicity	No data available
STOT-Single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard	No data available

## 12. Ecological Information

Toxicity:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Other adverse effects:	No data available

## 13. Disposal Considerations

Waste treatment methods: Disposal should be in accordance with federal, state, and local requirements.

## 14. Transport Information

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable

## 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the product in question:

US Information:

TSCA Section 4(a) Final Test Rules Regulated:	Not regulated	
TSCA Section 5 Significant New Use Rule Regulation:	Proposed	
Ingredient:	Diethylene glycol diethyl ether	CAS Number 112-36-7
Reference:	76FR40850	

TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR):	Not regulated
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TSCA Section 12(b) One-Time Export Notification Regulated:		
Ingredient:	Diethylene glycol diethyl ether	CAS Number 112-36-7
Regulation:	TSCA 5 Proposed SNUR	

Clean Air Act Section 112, Hazardous Air Pollutants:	Diethylene glycol diethyl ether	CAS Number 112-36-7
EPCRA (SARA Title III) Section 313:	Diethylene glycol diethyl ether	CAS Number 112-36-7
NFPA/HMIS Hazard Rating :	Health (1), Flammability (2), Instability/Reactivity (0), Other (0)	
California Proposition 65:	Not regulated	

Canada Information:

WHMIS Controlled Product:	Not applicable(Manufactured article)
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Chemical safety assessment: This ink has not carried out any Chemical Safety Assessment yet.

## 16. Other Information

Update history:

Date of issue: 25.10.2013

This "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 does not warrant the completeness or accuracy of the information contained herein.

## Safety Data Sheet

In accordance with OSHA HCS 1910.1200

### 1. Identification

Product identifier: Eco Solvent Ultra Light Cyan VJ-MSINK3-LC220/440  
 Recommended use of the chemical and restrictions on use: Inkjet Printing  
 Manufacturer's details  
 Name: MUTOH America Inc.  
 Address: 2602 South 47th Street, Suite 102, Phoenix, AZ 85034  
 Contact section: Customer Care  
 Telephone number: 480-968-7772  
 Emergency phone number: 480-968-7772 (During normal opening times)

### 2. Hazards Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Physical Hazards FLAMMABLE LIQUID Category 4  
 Health Hazards Not classified  
 Environmental Hazards Not classified

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200;

Symbols: None  
 Signal word Warning  
 Hazard Statements Combustible liquid  
 Causes eye irritation

Precautionary Statements

[Prevention] Keep away from flames and hot surfaces. -No smoking.  
 Wash hands thoroughly after handling.  
 [Storage] Store in a well-ventilated place. Keep cool.  
 [Disposal] Dispose of contents/ container in accordance with related laws and local/ regional regulations.

Description of any hazards not otherwise classified;

Ink contact with skin may cause irritation, swelling or redness.

### 3. Composition/Information on Ingredients

Information on ingredients:

Chemical name	CAS No.	Concentration (wt %)
Diethylene glycol diethyl ether	112-36-7	55-65
Tetraethylene glycol dimethyl ether	143-24-8	10-20
Gamma-butyrolactone	96-48-0	<20
Proprietary organic materials	Trade secret	1-10
Tetraethylene glycol monobutyl ether	1559-34-8	1-5
Colorant	Trade secret	<1

### 4. First Aid Measures

Description of first aid measures

Eyes: Immediately flush with room temperature, low pressure and clean water for at least 15 minutes. Seek medical attention if eye irritation continues.  
 Skin: Wash surface areas with soap and water. Wash soiled clothing before rewearing. Consult a physician if irritation continues.  
 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.  
 Ingestion: Seek medical advice; and attention if stomach continues to be upset.

Most important symptoms/effects, acute and delayed:

Skin: Ink contact with skin may cause irritation, swelling or redness.

Indication of immediate medical attention and special treatment needed, if necessary: Not necessary

### 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, dry chemical, carbon dioxide or, alcohol foam  
 Unsuitable extinguishing media: None

Specific hazards arising from the chemical: None

Special protective equipment and precautions for fire-fighters: 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Eye or Skin protection required during clean-up. Use proper ventilation.  
 For emergency responders: None

Environmental precautions: Do not release to sewer, surface-or ground-water.

Methods and material for containment and cleaning up

Advice on how to contain a spill: Use sponges to wipe-up ink.  
 Advice how to clean-up a spill: Rinse area with damp cloth. Place waste in closed container for disposal.  
 Wash hands with soap and water.



Any other information: Do not dispose of waste to the sewer.  
 Reference to other sections: None

## 7. Handling And Storage

Precautions for safe handling

Recommendations: Use proper ventilation and no fire in work place. Keep out of reach of children and do not drink ink.  
 Do not dismantle cartridge.  
 Advice on general: Avoid contact with eyes or clothing.  
 occupational hygiene: In the case of skin contact, wash with soap and water.  
 Conditions for safe storage, including any incompatibilities: Do not store the cartridge in high or freezing temperatures.  
 Keep cartridge out of direct sunlight.  
 Specific end use(s): Not specified.

## 8. Exposure controls/personal protection

Control parameters: Diethylen glycol diethyl ether(CAS No.112-36-7)  
 California OELs(California Code of Regulations, Title 8, Section 5155. Airborne Contaminants)  
 The 8-Hour TWA Exposure Value: 5 ppm  
 The 8-Hour TWA Exposure Value: 33 mg/m<sup>3</sup>  
 Appropriate engineering controls: Proper ventilation, in prevention  
 Individual protection measures, such as personal protective equipment  
 Use of personal protective equipment: Not required under suitable use as setting the cartridge on the printer.  
 Detailed specification on equipment to provide adequate and suitable protection  
 (a) eye/face protection: Not required under suitable use as setting the cartridge on the printer.  
 (b) skin protection: hand protection & others:  
 Not required under suitable use as setting the cartridge on the printer.  
 (c) respiratory protection: Not required under suitable use as setting the cartridge on the printer.  
 (d) thermal hazards: Not required under suitable use as setting the cartridge on the printer.  
 Environmental exposure controls: Not established

## 9. Physical and Chemical Properties

Information on basic physical and chemical properties:

Appearance: Cyan liquid  
 Odor: Slightly  
 Odour threshold: No data available  
 pH: No data available  
 Melting point/ freezing point: No data available  
 Initial boiling point and boiling range: No data available  
 Flash point: about 71 °C (Closed cup)  
 Evaporation rate: No data available  
 Flammability(solid, gas): Not applicable (liquid)  
 Upper/lower flammability or explosive limits: No data available  
 Vapor pressure: No data available  
 Vapor density: Greater than 1 (air=1)  
 Relative density: No data available  
 Solubility(ies): Soluble  
 Partition coefficient:n-octanol/water: No data available  
 Auto-ignition temperature: No data available  
 Decomposition temperature: No data available  
 Viscosity: No data available  
 Explosive properties: Explosive limits: 1.4-6.9 v/v% as Gamma-butyrolactone  
 Oxidizing properties: None  
 Other information: None

## 10. Stability and Reactivity

Reactivity: Stable under normal temperature  
 Chemical stability: Stable under normal temperature  
 Possibility of hazardous reactions: None  
 Conditions to avoid: High and freezing temperatures  
 Incompatible materials: Oxidizers and explosives  
 Hazardous decomposition products: No data available

## 11. Toxicological Information

Information on toxicological effects:

Acute toxicity: Oral LD50: > 2500 mg/kg (Rat)  
 Dermal LD50: > 2000 mg/kg (Rat)  
 Skin corrosion/irritation: Mild irritant (Rabbit, OECD 404)  
 Serious eye damage /eye irritation: Mild irritant (Rabbit, OECD 405)  
 Skin sensitization: Non-sensitizer (LLNA, OECD 429)  
 Germ cell mutagenicity: Negative (by Ames Test)  
 Carcinogenicity: Not contain any substances listed in IARC Monographs (1,2A and 2B)  
 Reproductive toxicity: No data available

STOT-Single exposure: No data available  
STOT-repeated exposure: No data available  
Aspiration hazard: No data available

**12. Ecological Information**

Toxicity: No data available  
Persistence and degradability: No data available  
Bioaccumulative potential: No data available  
Mobility in soil: No data available  
Other adverse effects: No data available

**13. Disposal Considerations**

Waste treatment methods: Disposal should be in accordance with federal, state, and local requirements.

**14. Transport Information**

UN number: Not applicable  
UN proper shipping name: Not applicable  
Transport hazard class(es): Not applicable  
Packing group: Not applicable  
Environmental hazards: Not applicable  
Special precautions for user: Not applicable  
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

**15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the product in question:

## US Information:

TSCA Section 4(a) Final Test Rules Regulated: Not regulated  
TSCA Section 5 Significant New Use Rule Regulation: Proposed  
Ingredient: Diethylene glycol diethyl ether CAS Number 112-36-7  
Reference: 76FR40850  
Ingredient: Tetraethylene glycol dimethyl ether CAS Number 143-24-8  
Reference: 76ER40850  
TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR): Not regulated  
TSCA Section 12(b) One-Time Export Notification Regulated:  
Ingredient: Diethylene glycol diethyl ether CAS Number 112-36-7  
Regulation: TSCA 5 Proposed SNUR  
Ingredient: Tetraethylene glycol dimethyl ether CAS Number 143-24-8  
Regulation: TSCA 5 Proposed SNUR  
Clean Air Act Section 112, Hazardous Air Pollutants: Diethylene glycol diethyl ether CAS Number 112-36-7  
EPCRA (SARA Title III) Section 313: Diethylene glycol diethyl ether CAS Number 112-36-7  
NFPA/HMIS Hazard Rating : Health (1), Flammability (2), Instability/Reactivity (0), Other (0)  
California Proposition 65: Not regulated

## Canada Information:

WHMIS Controlled Product: Not applicable(Manufactured article)  
Chemical safety assessment: This ink has not carried out any Chemical Safety Assessment yet.

**16. Other Information**

Update history:  
Date of issue: 25.10.2013

This "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 does not warrant the completeness or accuracy of the information contained herein.

## Safety Data Sheet

In accordance with OSHA HCS 1910.1200

### 1. Identification

Product identifier: Eco Solvent Ultra Light Black VJ-MSINK3-LK440  
 Recommended use of the chemical and restrictions on use: Inkjet Printing  
 Manufacturer's details  
 Name: MUTOH America Inc.  
 Address: 2602 South 47th Street, Suite 102, Phoenix, AZ 85034  
 Contact section: Customer Care  
 Telephone number: 480-968-7772  
 Emergency phone number: 480-968-7772 (During normal opening times)

### 2. Hazards Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Physical Hazards FLAMMABLE LIQUID Category 4  
 Health Hazards Not classified  
 Environmental Hazards Not classified

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200;

Symbols: None  
 Signal word Warning  
 Hazard Statements Combustible liquid

Precautionary Statements

[Prevention] Keep away from flames and hot surfaces. -No smoking.  
 Wash hands thoroughly after handling.  
 [Storage] Store in a well-ventilated place. Keep cool.  
 [Disposal] Dispose of contents/ container in accordance with related laws and local/ regional regulations.

Description of any hazards not otherwise classified;

Ink contact with skin may cause irritation, swelling or redness.

### 3. Composition/Information on Ingredients

Information on ingredients:

Chemical name	CAS No.	Concentration (wt %)
Diethylene glycol diethyl ether	112-36-7	40-50
Tetraethylene glycol dimethyl ether	143-24-8	10-20
Gamma-butyrolactone	96-48-0	<20
Carbon Black	1333-86-4	<1
Diethylene Glycol Methyl Ethyl Ether	1002-67-1	15-25

### 4. First Aid Measures

Description of first aid measures

Eyes: Immediately flush with room temperature, low pressure and clean water for at least 15 minutes.  
 Seek medical attention if eye irritation continues.  
 Skin: IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.  
 If skin irritation occurs: Get medical advice/attention.  
 Inhalation: IF exposed or concerned: Get medical advice/attention.  
 Remove subject to ventilated fresh air. If not breathing, give artificial respiration right away.  
 If breathing is difficult, give oxygen.  
 Ingestion: IF exposed or concerned: Get medical advice/attention.  
 IF SWALLOWED: Do not induce vomiting.

Most important symptoms and effects, both acute and delayed:

Skin: Ink contact with skin may cause irritation, swelling or redness.

Indication of any immediate medical attention and special treatment needed: Not necessary

### 5. Fire-Fighting Measures

Extinguishing Media

Suitable extinguishing media: Water spray, dry chemical, carbon dioxide or, alcohol foam  
 Unsuitable extinguishing media: None

Specific hazards arising from the substance or mixture: None

Advice for firefighters: 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Eye or Skin protection required during clean-up. Use proper ventilation.  
 For emergency responders: None

Environmental precautions: Do not release to sewer, surface-or ground-water.

Methods and material for containment and cleaning up

Advice on how to contain a spill: Use sponges to wipe-up ink.  
 Advice how to clean-up a spill: Rinse area with damp cloth. Place waste in closed container for disposal.  
 Wash hands with soap and water.

Any other information: Do not dispose of waste to the sewer.  
 Reference to other sections: Please refer SECTION 13 for disposal.

## 7. Handling and Storage

Precautions for safe handling

Recommendations: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Use proper ventilation and no fire in work place.

Advice on general

Keep out of reach of children and do not drink ink.

Avoid contact with skin, eyes or clothing.

occupational hygiene:

In the case of skin contact, wash with soap and water.

Conditions for safe storage, including any incompatibilities:

Store locked up. Do not store the cartridge in high or freezing temperatures.

Keep cartridge out of direct sunlight.

Do not store the cartridge with oxidizing agents or explosives.

Make sure cartridge is dry before insertion into printer housing.

Specific end use(s):

Not specified

## 8. Exposure controls/personal protection

Control parameters:

Diethylen glycol diethyl ether(CAS No.112-36-7)

California OELs(California Code of Regulations, Title 8, Section 5155. Airborne Contaminants)

The 8-Hour TWA Exposure Value: 5 ppm

The 8-Hour TWA Exposure Value: 33 mg/m<sup>3</sup>

Exposure Controls

Appropriate engineering controls: Proper ventilation

Individual protection measures, such as personal protective equipment

Use of personal protective equipment: Not required under suitable use as setting the cartridge on the printer under ventilation.

If there is a possibility of exposure to raw ink: Wear protective gloves/protective clothing/eye protection/

Detailed specification on equipment to provide adequate and suitable protection

(a) eye/face protection: Not required under suitable use as setting the cartridge on the printer.

If there is a possibility of exposure to raw ink: Wear eye protection/face protection.

(b) skin protection: hand protection & others:

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

If there is a possibility of exposure to raw ink: Wear protective gloves/protective clothing.

(c) respiratory protection:

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

In case of inadequate ventilation wear respiratory protection.

(d) thermal hazards:

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

Environmental exposure controls: Not established

## 9. Physical and Chemical Properties

Information on basic physical and chemical properties:

Appearance:

Black liquid

Odor:

Slightly

Odour threshold:

No data available

pH:

No data available

Melting point/ freezing point:

No data available

Initial boiling point and boiling range:

No data available

Flash point:

about 71°C (Closed cup)

Evaporation rate:

No data available

Flammability(solid, gas):

Not applicable (liquid)

Upper/lower flammability or explosive limits:

No data available

Vapor pressure:

No data available

Vapor density:

Greater than 1 (air=1)

Relative density:

No data available

Solubility(ies):

Soluble

Partition coefficient:n-octanol/water:

No data available

Auto-ignition temperature:

No data available

Decomposition temperature:

No data available

Viscosity:

No data available

Explosive properties:

Explosive limits: 1.4-6.9 v/v% as Gamma-butyrolactone

Oxidizing properties:

None

Other information

None

## 10. Stability and Reactivity

Reactivity:

Stable under normal temperature

Chemical stability:

Stable under normal temperature

Possibility of hazardous reactions:

None

Conditions to avoid:

High and freezing temperatures

Incompatible materials:

Oxidizers and explosives

Hazardous decomposition products:

No data available

## 11. Toxicological Information

Information on toxicological effects:

Germ cell mutagenicity: (in vitro)Ames test: Negative  
 Carcinogenicity: 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.

Delayed and immediate effects and also chronic effects from short- and long-term expc Not applicable

Numerical measures of toxicity (such as acute toxicity estimat Not applicable

Whether the chemical is listed in the NTP Report on Carcinogens or has been found to be a potential carcinogen in the IARC Monographs, or by OSHA;

IARC: Group 2B (Carbon Black)

NTP Report: Not listed

OSHA: Not listed

## 12. Ecological Information

Toxicity: No data available  
 Persistence and degradability: No data available  
 Bioaccumulative potential: No data available  
 Mobility in soil: No data available  
 Results of PBT and vPvB assessment: Has not carried out PBT and vPvB assessment  
 Other adverse effects: No data available

## 13. Disposal Considerations

Waste treatment methods: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## 14. Transport Information

UN number: Not applicable  
 UN proper shipping name: Not applicable  
 Transport hazard class(es): Not applicable  
 Packing group: Not applicable  
 Environmental hazards: Not applicable  
 Special precautions for user: Not applicable  
 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

## 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture:

US Information:

TSCA Section 4(a) Final Test Rules Regulated:	Not regulated
TSCA Section 5 Significant New Use Rule Regulation:	Proposed
Ingredient:	Diethylene glycol diethyl ether CAS Number 112-36-7
Reference:	76FR40850
Ingredient:	Tetraethylene glycol dimethyl ether CAS Number 143-24-8
Reference:	76ER40850

TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR): Not regulated

TSCA Section 12(b) One-Time Export Notification Regulated:	
Ingredient:	Diethylene glycol diethyl ether CAS Number 112-36-7
Regulation:	TSCA 5 Proposed SNUR
Ingredient:	Tetraethylene glycol dimethyl ether CAS Number 143-24-8
Regulation:	TSCA 5 Proposed SNUR

Clean Air Act Section 112, Hazardous Air Pollutants:	Diethylene glycol diethyl ether CAS Number 112-36-7
	Diethylene Glycol Methyl Ethyl Ethe CAS Number 1002-67-1
EPCRA (SARA Title III) Section 313:	Diethylene glycol diethyl ether CAS Number 112-36-7
	Diethylene Glycol Methyl Ethyl Ethe CAS Number 1002-67-1

NFPA/HMIS Hazard Rating : Health (1), Flammability (2), Instability/Reactivity (0), Other (0)  
 California Proposition 65: Not regulated

Canada Information:

WHMIS Controlled Product: Not applicable(Manufactured article)

Australia Information:

Statement of Hazardous Nature: Classified as Toxic and Irritant according to criteria of NOHSC

New Zealand Information:

Hazardous Substances and New Organisms Act 1996: Not applicable (Manufactured article)

Chemical safety assessment: This ink has not carried out any Chemical Safety Assessment yet.

## 16. Other Information

Update history:

Date of issue: 25.10.2013

This "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 does not warrant the completeness or accuracy of the information contained herein.

## Safety Data Sheet

In accordance with OSHA HCS 1910.1200

### 1. Identification

Product identifier: Eco Solvent Ultra Light Magenta VJ-MSINK3-LM220/440  
 Recommended use of the chemical and restrictions on use: Inkjet Printing  
 Manufacturer's details  
 Name: MUTOH America Inc.  
 Address: 2602 South 47th Street, Suite 102, Phoenix, AZ 85034  
 Contact section: Customer Care  
 Telephone number: 480-968-7772  
 Emergency phone number: 480-968-7772 (During normal opening times)

### 2. Hazards Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Physical Hazards FLAMMABLE LIQUID Category 4  
 Health Hazards Not classified  
 Environmental Hazards Not classified

Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200;

Symbols: None  
 Signal word Warning  
 Hazard Statements Combustible liquid  
 Causes eye irritation

Precautionary Statements

[Prevention] Keep away from flames and hot surfaces. -No smoking.  
 Wash hands thoroughly after handling.  
 [Storage] Store in a well-ventilated place. Keep cool.  
 [Disposal] Dispose of contents/ container in accordance with related laws and local/ regional regulations.

Description of any hazards not otherwise classified;

Ink contact with skin may cause irritation, swelling or redness.

### 3. Composition/Information on Ingredients

Information on ingredients:

Chemical name	CAS No.	Concentration (wt %)
Diethylene glycol diethyl ether	112-36-7	55-65
Tetraethylene glycol dimethyl ether	143-24-8	10-20
Gamma-butyrolactone	96-48-0	<20
Proprietary organic materials	Trade secret	1-10
Tetraethylene glycol monobutyl ether	1559-34-8	1-5
Colorant	Trade secret	<1

### 4. First Aid Measures

Description of first aid measures

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

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

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.

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

Most important symptoms/effects, acute and delayed:

Skin: Ink contact with skin may cause irritation, swelling or redness.

Indication of immediate medical attention and special treatment needed, if necessary: Not necessary

### 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, dry chemical, carbon dioxide or, alcohol foam

Unsuitable extinguishing media: None

Specific hazards arising from the chemical: None

Special protective equipment and precautions for fire-fighters: 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

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Eye or Skin protection required during clean-up. Use proper ventilation.

For emergency responders: None

Environmental precautions: Do not release to sewer, surface-or ground-water.

Methods and material for containment and cleaning up

Advice on how to contain a spill: Use sponges to wipe-up ink.

Advice how to clean-up a spill: Rinse area with damp cloth. Place waste in closed container for disposal.

Wash hands with soap and water.

Any other information: Do not dispose of waste to the sewer.  
 Reference to other sections: None

## 7. Handling and Storage

Precautions for safe handling

Recommendations: Use proper ventilation and no fire in work place. Keep out of reach of children and do not drink ink.  
 Do not dismantle cartridge.  
 Advice on general occupational hygiene: Avoid contact with eyes or clothing.  
 In the case of skin contact, wash with soap and water.  
 Conditions for safe storage, including any incompatibilities: Do not store the cartridge in high or freezing temperatures.  
 Keep cartridge out of direct sunlight.  
 Do not store the cartridge with oxidizing agents or explosives.  
 Make sure cartridge is dry before insertion into printer housing.  
 Specific end use(s): Not specified.

## 8. Exposure controls/personal protection

Control parameters: Diethylen glycol diethyl ether(CAS No.112-36-7)  
 California OELs(California Code of Regulations, Title 8, Section 5155. Airborne Contaminants)  
 The 8-Hour TWA Exposure Value: 5 ppm  
 The 8-Hour TWA Exposure Value: 33 mg/m<sup>3</sup>  
 Appropriate engineering controls: Proper ventilation, in prevention  
 Individual protection measures, such as personal protective equipment  
 Use of personal protective equipment: Not required under suitable use as setting the cartridge on the printer.  
 Detailed specification on equipment to provide adequate and suitable protection  
 (a) eye/face protection: Not required under suitable use as setting the cartridge on the printer.  
 (b) skin protection: hand protection & others:  
 Not required under suitable use as setting the cartridge on the printer.  
 (c) respiratory protection: Not required under suitable use as setting the cartridge on the printer.  
 (d) thermal hazards: Not required under suitable use as setting the cartridge on the printer.  
 Environmental exposure controls: Not established

## 9. Physical and Chemical Properties

Information on basic physical and chemical properties:

Appearance: Magenta liquid  
 Odor: Slightly  
 Odour threshold: No data available  
 pH: No data available  
 Melting point/ freezing point: No data available  
 Initial boiling point and boiling range: No data available  
 Flash point: about 71°C (Closed cup)  
 Evaporation rate: No data available  
 Flammability(solid, gas): Not applicable (liquid)  
 Upper/lower flammability or explosive limits: No data available  
 Vapor pressure: No data available  
 Vapor density: Greater than 1 (air=1)  
 Relative density: No data available  
 Solubility(ies): Soluble  
 Partition coefficient:n-octanol/water: No data available  
 Auto-ignition temperature: No data available  
 Decomposition temperature: No data available  
 Viscosity: No data available  
 Explosive properties: Explosive limits: 1.4-6.9v/v% as Gamma-butyrolactone  
 Oxidizing properties: None  
 Other information: None

## 10. Stability and Reactivity

Reactivity: Stable under normal temperature  
 Chemical stability: Stable under normal temperature  
 Possibility of hazardous reactions: None  
 Conditions to avoid: High and freezing temperatures  
 Incompatible materials: Oxidizers and explosives  
 Hazardous decomposition products: No data available

## 11. Toxicological Information

Information on toxicological effects:

Acute toxicity: Oral LD50: > 2500 mg/kg (Rat)  
 Dermal LD50: > 2000 mg/kg (Rat)  
 Skin corrosion/irritation: Mild irritant (Rabbit, OECD 404)  
 Serious eye damage /eye irritation: Mild irritant (Rabbit, OECD 405)  
 Skin sensitization: Non-sensitizer (LLNA, OECD 429)



Germ cell mutagenicity:	Negative (by Ames Test)
Carcinogenicity:	Not contain any substances listed in IARC Monographs (1,2A and 2B)
Reproductive toxicity	No data available
STOT-Single exposure:	No data available
STOT-repeated exposure:	No data available
Aspiration hazard	No data available

**12. Ecological Information**

Toxicity:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Other adverse effects:	No data available

**13. Disposal Considerations**

Waste treatment methods: Disposal should be in accordance with federal, state, and local requirements.

**14. Transport Information**

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable

**15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the product in question:

US Information:

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Regulation:	TSCA 5 Proposed SNUR
Ingredient:	Tetraethylene glycol dimethyl ethe CAS Number 143-24-8
Regulation:	TSCA 5 Proposed SNUR
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EPCRA (SARA Title III) Section 313:	Diethylene glycol diethyl ether CAS Number 112-36-7
NFPA/HMIS Hazard Rating :	Health (1), Flammability (2), Instability/Reactivity (0), Other (0)
California Proposition 65:	Not regulated

Canada Information:

WHMIS Controlled Product: Not applicable(Manufactured article)

Chemical safety assessment: This ink has not carried out any Chemical Safety Assessment yet.

**16. Other Information**

Update history:

Date of issue: 25.10.2013

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