

# SAFETY DATA SHEET

Date of last issue: 2020-07-01

Date of first issue: 2013-06-13

## SECTION 1. IDENTIFICATION

Product name : Eco Solvent Ultra Black  
VJ-MSINK3A-BK220 / VJ-MSINK3A-BK440 /  
VJ-MSINK3A-BK1000

### Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772  
During normal opening times

### Recommended use of the chemical and restrictions on use

Recommended use : Inkjet printing

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification in accordance with 29 CFR 1910.1200


Flammable liquid : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Reproductive toxicity : Category 1B

### GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : Combustible liquid  
Causes skin irritation  
Causes serious eye irritation  
May damage fertility or the unborn child

Precautionary Statements : **Prevention:**  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**Response:**  
IF exposed or concerned: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of soap and water.  
IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue

rinsing.

**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.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
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

**SECTION 4. FIRST AID MEASURES**

Description of first aid measures

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.

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.

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

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

**SECTION 5. FIRE-FIGHTING MEASURES**

Extinguishing Media

Suitable extinguishing media: Water spray  
Dry chemical  
Carbon dioxide (CO2)  
Alcohol-resistant foam

Unsuitable extinguishing media : None known.

Special hazards arising from : None

the substance or mixture

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.

## SECTION 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 materials 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.

## SECTION 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.  
Keep out of reach of children and do not drink ink.  
Do not dismantle cartridge.

Advice on general occupational hygiene : Avoid contact with skin, eyes or clothing.  
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.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Diethylene 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: 33mg/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/ face protection/ respiratory 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

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- Appearance : liquid
- Color : black
- Odor : Slightly
- Odor 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  
Method: Seta closed cup
- Evaporation rate : No data available
- Flammability (solid, gas) : Not applicable
- Flammability (liquids) : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : 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
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Explosive properties	:	Explosive limits:1.4-6.9v/v% as Gamma-butyrolactone
Oxidizing properties	:	None
Particle size	:	Not applicable

## SECTION 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

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects:

Acute toxicity	:	Oral LD50: > 2500 mg/kg (Rat) Dermal LD50: > 2000 mg/kg (Rat)
Irritation		
Eye	:	Moderate irritant (Rabbit, OECD 405) Not meet the criteria for classification according to EU Directive 1999/45/EC Category2 for classification according to EU Directive (EC) No 1272/2008
Skin	:	Mild irritant (Rabbit, OECD 404)
Corrosivity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC
Sensitisation		
Skin	:	Non-sensitizer (LLNA, OECD 429)
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.

- Mutagenicity : Negative (by Ames Test)
- Toxicity for reproduction : T; R61,62 for classification according to EU Directive 1999/45/EC  
Category 1B for classification according to EU Directive (EC) No 1272/2008

## SECTION 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

## SECTION 13. DISPOSAL CONSIDERATIONS

- Waste treatment methods : Disposal should be in accordance with federal, state, and local requirements.  
in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## SECTION 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

## SECTION 15. REGULATORY INFORMATION

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

US Information:

- TSCA Section 4(a) Final : Not regulated
- Test Rules Regulated

TSCA Section 5 Significant New Use Rule Regulation:

Ingredient	:	Diethylene glycol diethyl ether	112-36-7
Reference	:	40 CFR 721.10229 (Listed)	
Ingredient	:	Tetraethylene glycol dimethyl ether	143-24-8
Reference	:	76 FR 40850 (Proposed)	

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

TSCA Section 12(b) One-Time Export Notification Regulated:


Ingredient	:	Diethylene glycol diethyl ether	112-36-7
Regulation	:	TSCA 5 SNUR	
Ingredient	:	Tetraethylene glycol dimethyl ether	143-24-8
Regulation	:	TSCA 5 Proposed SNUR	

Clean Air Act Section 112, : Diethylene glycol diethyl ether 112-36-7  
 Hazardous Air Pollutants

EPCRA (SARA Title III) : Diethylene glycol diethyl ether 112-36-7  
 Section 313

NFPA/HMIS Hazard Rating: Health (3), Flammability (2), Instability/Reactivity (0), Other (0)

HMIS Hazard Rating : Health (3), Flammability (2), Instability/Reactivity (0), PPE (D)

California Proposition 65 :  **WARNING:** This product can expose you to chemicals including Carbon black, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16. OTHER INFORMATION

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

Date of last issue: 2020-07-01

Date of first issue: 2013-06-13

## SECTION 1. IDENTIFICATION

Product name : Eco Solvent Ultra Cyan  
VJ-MSINK3A-CY220 / VJ-MSINK3A-CY440 /  
VJ-MSINK3A-CY1000

### Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc  
Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042  
Telephone : 480-968-7772  
Emergency telephone : 480-968-7772  
During normal opening times

### Recommended use of the chemical and restrictions on use

Recommended use : Inkjet printing

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquid : Category 4  
Skin irritation : Category 2  
Reproductive toxicity : Category 1B

### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Combustible liquid  
Causes skin irritation  
May damage fertility or the unborn child

Precautionary Statements : **Prevention:**  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**Response:**  
IF exposed or concerned: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of soap and water.  
**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.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
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

**SECTION 4. FIRST AID MEASURES**

Description of first aid measures

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.

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.

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

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

**SECTION 5. FIRE-FIGHTING MEASURES**

Extinguishing Media

Suitable extinguishing media: Water spray  
Dry chemical  
Carbon dioxide (CO2)  
Alcohol-resistant foam

Unsuitable extinguishing media : None known.

Special 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.

## SECTION 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 materials 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.

## SECTION 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.  
Keep out of reach of children and do not drink ink.  
Do not dismantle cartridge.

Advice on general occupational hygiene : Avoid contact with skin, eyes or clothing.  
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.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Diethylene 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: 33mg/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/ face protection/ respiratory 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: : Not required under suitable use as setting the cartridge on the printer.  
hand protection & Others : 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

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- Appearance : liquid
- Color : cyan
- Odor : Slightly
- Odor 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  
Method: Seta closed cup
- Evaporation rate : No data available
- Flammability (solid, gas) : Not applicable
- Flammability (liquids) : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : 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
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	No data available
Explosive properties	:	Explosive limits:1.4-6.9v/v% as Gamma-butyrolactone
Oxidizing properties	:	None
Particle size	:	Not applicable

## SECTION 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

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects:

Acute toxicity	:	Oral LD50: > 2500 mg/kg (Rat) Dermal LD50: > 2000 mg/kg (Rat)
Irritation	:	
Eye	:	Mild irritant (Rabbit, OECD 405)
Skin	:	Mild irritant (Rabbit, OECD 404)
Corrosivity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC
Sensitisation	:	
Skin	:	Non-sensitizer (LLNA, OECD 429)
Carcinogenicity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC Not contain any substances listed in IARC Monographs (1,2A and 2B)
Mutagenicity	:	Negative (by Ames Test)
Toxicity for reproduction	:	T; R61,62 for classification according to EU Directive 1999/45/EC Category1B for classification according to EU Directive (EC) No 1272/2008

**SECTION 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

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods : Disposal should be in accordance with federal, state, and local requirements. in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**SECTION 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

**SECTION 15. REGULATORY INFORMATION**

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

US Information:

TSCA Section 4(a) Final : Not regulated  
 Test Rules Regulated

TSCA Section 5 Significant New Use Rule Regulation:

Ingredient	: Diethylene glycol diethyl ether	112-36-7
Reference	: 40 CFR 721.10229 (Listed)	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8
Reference	: 76 FR 40850 (Proposed)	

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

TSCA Section 12(b) One-Time Export Notification Regulated:

Ingredient	: Diethylene glycol diethyl ether	112-36-7
Regulation	: TSCA 5 SNUR	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8

Regulation : TSCA 5 Proposed SNUR

Clean Air Act Section 112, : Diethylene glycol diethyl ether 112-36-7  
Hazardous Air Pollutants

EPCRA (SARA Title III) : Diethylene glycol diethyl ether 112-36-7  
Section 313

NFPA/HMIS Hazard Rating: Health (3), Flammability (2), Instability/Reactivity (0), Other (0)

HMIS Hazard Rating : Health (3), Flammability (2), Instability/Reactivity (0), PPE (D)

California Proposition 65 : Not regulated

**SECTION 16. OTHER INFORMATION**

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

Date of last issue: 2020-07-01

Date of first issue: 2013-06-13

## SECTION 1. IDENTIFICATION

Product name : Eco Solvent Ultra Magenta  
VJ-MSINK3A-MA220 / VJ-MSINK3A-MA440 /  
VJ-MSINK3A-MA1000

### Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc  
Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042  
Telephone : 480-968-7772  
Emergency telephone : 480-968-7772  
During normal opening times

### Recommended use of the chemical and restrictions on use

Recommended use : Inkjet printing

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquid : Category 4  
Skin irritation : Category 2  
Reproductive toxicity : Category 1B

### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Combustible liquid  
Causes skin irritation  
May damage fertility or the unborn child

Precautionary Statements : **Prevention:**  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**Response:**  
IF exposed or concerned: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of soap and water.  
**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.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
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

**SECTION 4. FIRST AID MEASURES**

Description of first aid measures

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.

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.

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

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

**SECTION 5. FIRE-FIGHTING MEASURES**

Extinguishing Media

Suitable extinguishing media: Water spray  
Dry chemical  
Carbon dioxide (CO2)  
Alcohol-resistant foam

Unsuitable extinguishing media : None known.

Special 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.



**SECTION 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 materials 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.

**SECTION 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.  
Keep out of reach of children and do not drink ink.  
Do not dismantle cartridge.
  - Advice on general occupational hygiene : Avoid contact with skin, eyes or clothing.  
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.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Control parameters:
  - Diethylene 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: 33mg/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/ face protection/ respiratory 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: : Not required under suitable use as setting the cartridge on the hand protection & printer.  
others : If there is a possibility of exposure to raw ink: Wear protective gloves/ protective clothing
  - (c) respiratory : Not required under suitable use as setting the cartridge on the protection 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 : Not established  
controls

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- Appearance : liquid
- Color : magenta
- Odor : Slightly
- Odor 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  
Method: Seta closed cup
- Evaporation rate : No data available
- Flammability (solid, gas) : Not applicable
- Flammability (liquids) : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : 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
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	No data available
Explosive properties	:	Explosive limits:1.4-6.9v/v% as Gamma-butyrolactone
Oxidizing properties	:	None
Particle size	:	Not applicable

## SECTION 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

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects:

Acute toxicity	:	Oral LD50: > 2500 mg/kg (Rat) Dermal LD50: > 2000 mg/kg (Rat)
Irritation Eye	:	Moderate irritant (Rabbit, OECD 405)
Skin	:	Mild irritant (Rabbit, OECD 404)
Corrosivity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC
Sensitisation Skin	:	Non-sensitizer (LLNA, OECD 429)
Carcinogenicity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC Not contain any substances listed in IARC Monographs (1,2A and 2B)
Mutagenicity	:	Negative (by Ames Test)
Toxicity for reproduction	:	T; R61,62 for classification according to EU Directive 1999/45/EC Category1B for classification according to EU Directive (EC) No 1272/2008

**SECTION 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

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods : Disposal should be in accordance with federal, state, and local requirements. in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**SECTION 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

**SECTION 15. REGULATORY INFORMATION**

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

US Information:

TSCA Section 4(a) Final : Not regulated  
 Test Rules Regulated

TSCA Section 5 Significant New Use Rule Regulation:

Ingredient	: Diethylene glycol diethyl ether	112-36-7
Reference	: 40 CFR 721.10229 (Listed)	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8
Reference	: 76 FR 40850 (Proposed)	

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

TSCA Section 12(b) One-Time Export Notification Regulated:

Ingredient	: Diethylene glycol diethyl ether	112-36-7
Regulation	: TSCA 5 SNUR	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8

Regulation : TSCA 5 Proposed SNUR

Clean Air Act Section 112, : Diethylene glycol diethyl ether 112-36-7  
Hazardous Air Pollutants

EPCRA (SARA Title III) : Diethylene glycol diethyl ether 112-36-7  
Section 313

NFPA/HMIS Hazard Rating: Health (3), Flammability (2), Instability/Reactivity (0), Other (0)

HMIS Hazard Rating : Health (3), Flammability (2), Instability/Reactivity (0), PPE (D)

California Proposition 65 : Not regulated

**SECTION 16. OTHER INFORMATION**

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

Date of last issue: 2020-07-01

Date of first issue: 2014-10-06

## SECTION 1. IDENTIFICATION

Product name : Eco Solvent Ultra Metallic  
VJ-MSINK3A-MT220

### Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772  
During normal opening times

### Recommended use of the chemical and restrictions on use

Recommended use : Inkjet printing

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquid : Category 4

Skin irritation : Category 2

Reproductive toxicity : Category 1B

### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Combustible liquid  
Causes skin irritation  
May damage fertility or the unborn child

Precautionary Statements : **Prevention:**  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**Response:**  
IF exposed or concerned: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of soap and water.  
**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.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene glycol diethyl ether	112-36-7	70 - 80
Tetraethylene glycol dimethyl ether	143-24-8	10 - 20
Gamma-butyrolactone	96-48-0	about 10
Proprietary organic materials	Trade secret	1 - 5
Colorant	Trade secret	1 - 5

### SECTION 4. FIRST AID MEASURES

Description of first aid measures

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

### SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

- Suitable extinguishing media: Water spray  
 Dry chemical  
 Carbon dioxide (CO2)  
 Alcohol-resistant foam
- Unsuitable extinguishing media : None known.
- Special 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.

### SECTION 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 materials 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.

## SECTION 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.  
Keep out of reach of children and do not drink ink.  
Do not dismantle cartridge.

Advice on general occupational hygiene : Avoid contact with skin, eyes or clothing.  
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.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Diethylene 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: 33mg/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/ face protection/ respiratory 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: : Not required under suitable use as setting the cartridge on the hand protection & printer.  
others : If there is a possibility of exposure to raw ink: Wear protective gloves/ protective clothing

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

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance : liquid

Color : silver

Odor : Slightly

Odor 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 78.7 °C  
Method: Seta closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Vapor density : No data available

Relative density : No data available

Solubility(ies) : Soluble

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

Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	Less than 5 mPa·s at 20°C
Explosive properties	:	Explosive limits:1.4-6.9v/v% as Gamma-butyrolactone
Oxidizing properties	:	None
Particle size	:	Not applicable

## SECTION 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

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects:

Acute toxicity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC
Irritation		
Eye	:	Not meet the criteria for classification according to EU Directive 1999/45/EC
Skin	:	Xi; R38 for classification according to EU Directive 1999/45/EC Category2 for classification according to EU Directive (EC) No 1272/2008
Corrosivity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC
Sensitisation		
Skin	:	Not meet the criteria for classification according to EU Directive 1999/45/EC
Carcinogenicity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC Not contain any substances listed in IARC Monographs (1,2A and 2B)
Mutagenicity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC
Toxicity for reproduction	:	T; R61,62 for classification according to EU Directive 1999/45/EC Category1B for classification according to EU Directive (EC) No

1272/2008

**SECTION 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

**SECTION 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.

**SECTION 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

**SECTION 15. REGULATORY INFORMATION**

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

US Information:

TSCA Section 4(a) Final : Not regulated  
 Test Rules Regulated

TSCA Section 5 Significant New Use Rule Regulation:

Ingredient	: Diethylene glycol diethyl ether	112-36-7
Reference	: 40 CFR 721.10229 (Listed)	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8
Reference	: 76 FR 40850 (Proposed)	

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

TSCA Section 12(b) One-Time Export Notification Regulated:

Ingredient	: Diethylene glycol diethyl ether	112-36-7
Regulation	: TSCA 5 SNUR	

Ingredient	:	Tetraethylene glycol dimethyl ether	143-24-8
Regulation	:	TSCA 5 Proposed SNUR	
Clean Air Act Section 112, Hazardous Air Pollutants	:	Diethylene glycol diethyl ether	112-36-7
EPCRA (SARA Title III) Section 313	:	Diethylene glycol diethyl ether	112-36-7
NFPA/HMIS Hazard Rating:		Health (3), Flammability (2), Instability/Reactivity (0), Other (0)	
HMIS Hazard Rating	:	Health (3), Flammability (2), Instability/Reactivity (0), PPE (D)	
California Proposition 65	:	Not regulated	

## SECTION 16. OTHER INFORMATION

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

Date of last issue: 2020-07-01

Date of first issue: 2014-10-06

## SECTION 1. IDENTIFICATION

Product name : Eco Solvent Ultra White  
VJ-MSINK3A-WH220

### Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772  
During normal opening times

### Recommended use of the chemical and restrictions on use

Recommended use : Inkjet printing

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquid : Category 4

Skin irritation : Category 2

### GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Combustible liquid  
Causes skin irritation

Precautionary Statements : **Prevention:**  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**Response:**  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
**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.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene glycol diethyl ether	112-36-7	50 - 60
Diethylene Glycol Methyl Ethyl Ether	1002-67-1	15 - 25
Titanium dioxide	13463-67-7	10 - 20
Proprietary organic materials	Trade secret	5 - 15

## SECTION 4. FIRST AID MEASURES

Description of first aid measures

- 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.
- 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.
- Eyes : Immediately flush with room temperature, low pressure and clean water for at least 15 minutes.  
Seek medical attention if eye irritation continues.
- Ingestion : Seek medical advice; and attention if stomach continues to be upset.  
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

## SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

- Suitable extinguishing media: Water spray  
Dry chemical  
Carbon dioxide (CO<sub>2</sub>)  
Alcohol-resistant foam
- Unsuitable extinguishing media : None known.
- Special 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.

## SECTION 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 materials 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.

## SECTION 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 skin, 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.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Diethylene 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/m3

Exposure Controls

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

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

Environmental exposure controls : Not established

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance : liquid

Color : white

Odor : Slightly

Odor 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 : 73.7 °C  
Method: Seta closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Vapor density : No data available

Relative density : No data available

Solubility(ies) : Soluble

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

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity : Less than 5 mPa·s at 20°C

Explosive properties : None

Oxidizing properties : None



Particle size : Not applicable

**SECTION 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

**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects:

Acute toxicity : Oral LD50: Not meet the criteria for classification according to EU Directive 1999/45/EC  
 Dermal LD50: Not meet the criteria for classification according to EU Directive 1999/45/EC

Irritation  
 Eye : Not meet the criteria for classification according to EU Directive 1999/45/EC

Skin : Xi; R38 for classification according to EU Directive 1999/45/EC  
 Category2 for classification according to EU Directive (EC) No 1272/2008

Corrosivity : Not meet the criteria for classification according to EU Directive 1999/45/EC

Sensitisation  
 Skin : Not meet the criteria for classification according to EU Directive 1999/45/EC

Carcinogenicity : Titanium dioxide is classified as “possibly carcinogen to human” (Group 2B) in animal chronic inhalation studies. The tumor formulation observed in only rats with animal chronic inhalation study are attributed to “lung overloading”, a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product, as intended does not result in inhalation of excessive dust. Epidemiological study to date have not revealed any evidence of the relation between exposure to titanium dioxide and diseases of the reparatory tract beyond general effects of dust.

Mutagenicity : Not meet the criteria for classification according to EU Directive 1999/45/EC

Toxicity for reproduction : Not meet the criteria for classification according to EU Directive 1999/45/EC

**SECTION 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

### SECTION 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.
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### SECTION 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

### SECTION 15. REGULATORY INFORMATION

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

US Information:

TSCA Section 4(a) Final : Not regulated  
Test Rules Regulated

TSCA Section 5 Significant New Use Rule Regulation:

Ingredient	:	Diethylene glycol diethyl ether	112-36-7
Reference	:	40 CFR 721.10229 (Listed)	

TSCA Section 8(a) : Not regulated

Preliminary Assessment Information Rule (PAIR)

TSCA Section 12(b) One-Time Export Notification Regulated:


Ingredient	:	Diethylene glycol diethyl ether	112-36-7
Regulation	:	TSCA 5 SNUR	

Clean Air Act Section 112, Hazardous Air Pollutants	:	Diethylene glycol diethyl ether	112-36-7
	:	Diethylene Glycol Methyl Ethyl Ether	1002-67-1

EPCRA (SARA Title III) Section 313	:	Diethylene glycol diethyl ether	112-36-7
	:	Diethylene Glycol Methyl Ethyl Ether	1002-67-1

NFPA/HMIS Hazard Rating: Health (1), Flammability (2), Instability/Reactivity (0), Other (0)

HMIS Hazard Rating : Health (1), Flammability (2), Instability/Reactivity (0), PPE (D)

California Proposition 65 :  **WARNING:** This product can expose you to chemicals including Titanium dioxide, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16. OTHER INFORMATION

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

Date of last issue: 2020-07-01

Date of first issue: 2013-06-13

## SECTION 1. IDENTIFICATION

Product name : Eco Solvent Ultra Yellow  
VJ-MSINK3A-YE220 / VJ-MSINK3A-YE440 /  
VJ-MSINK3A-YE1000

### Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc  
Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042  
Telephone : 480-968-7772  
Emergency telephone : 480-968-7772  
During normal opening times

### Recommended use of the chemical and restrictions on use


Recommended use : Inkjet printing

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquid : Category 4  
Skin irritation : Category 2  
Serious eye damage : Category 1  
Reproductive toxicity : Category 1B

### GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : Combustible liquid  
Causes skin irritation  
Causes serious eye damage  
May damage fertility or the unborn child

Precautionary Statements : **Prevention:**  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**Response:**  
IF exposed or concerned: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of soap and water.  
IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue

rinsing.

**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.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
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	1333-86-4	1 - 5

**SECTION 4. FIRST AID MEASURES**

Description of first aid measures

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.

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.

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

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

**SECTION 5. FIRE-FIGHTING MEASURES**

Extinguishing Media

Suitable extinguishing media: Water spray  
Dry chemical  
Carbon dioxide (CO2)  
Alcohol-resistant foam

Unsuitable extinguishing media : None known.

Special hazards arising from : None

the substance or mixture

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.

## SECTION 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 materials 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.

## SECTION 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.  
Keep out of reach of children and do not drink ink.  
Do not dismantle cartridge.

Advice on general occupational hygiene : Avoid contact with skin, eyes or clothing.  
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.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Diethylene 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: 33mg/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/ face protection/ respiratory 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

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- Appearance : liquid
- Color : yellow
- Odor : Slightly
- Odor 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  
Method: Seta closed cup
- Evaporation rate : No data available
- Flammability (solid, gas) : Not applicable
- Flammability (liquids) : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : 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
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, kinematic	: No data available
Explosive properties	: Explosive limits:1.4-6.9v/v% as Gamma-butyrolactone
Oxidizing properties	: None
Particle size	: Not applicable

## SECTION 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

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects:

Acute toxicity	: Oral LD50: > 2500 mg/kg (Rat) Dermal LD50: > 2000 mg/kg (Rat)
Irritation	
Eye	: Corrosive effects (Rabbit, OECD 405) Xi; R-41 for classification according to EU Directive 1999/45/EC Category1 for classification according to EU Directive (EC) No 1272/2008
Skin	: Mild irritant (Rabbit, OECD 404)
Corrosivity	: Not meet the criteria for classification according to EU Directive 1999/45/EC
Sensitisation	
Skin	: Non-sensitizer (LLNA, OECD 429)
Carcinogenicity	: Contains Nickel compounds
IARC	: Group 1
NTP	: Known to be human carcinogen



- Proposition 65 : Known to cause cancer
- Mutagenicity : Negative (by Ames Test)
- Toxicity for reproduction : T; R61,62 for classification according to EU Directive 1999/45/EC  
Category 1B for classification according to EU Directive (EC) No 1272/2008

## SECTION 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

## SECTION 13. DISPOSAL CONSIDERATIONS

- Waste treatment methods : Disposal should be in accordance with federal, state, and local requirements.  
in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## SECTION 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

## SECTION 15. REGULATORY INFORMATION

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

- TSCA Section 4(a) Final : Not regulated
- Test Rules Regulated

TSCA Section 5 Significant New Use Rule Regulation:

- Ingredient : Diethylene glycol diethyl ether 112-36-7
- Reference : 40 CFR 721.10229 (Listed)
- Ingredient : Tetraethylene glycol dimethyl ether 143-24-8
- Reference : 76 FR 40850 (Proposed)

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

TSCA Section 12(b) One-Time Export Notification Regulated:


Ingredient	: Diethylene glycol diethyl ether	112-36-7
Regulation	: TSCA 5 SNUR	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8
Regulation	: TSCA 5 Proposed SNUR	

Clean Air Act Section 112, : Diethylene glycol diethyl ether 112-36-7  
Hazardous Air Pollutants

EPCRA (SARA Title III) : Diethylene glycol diethyl ether 112-36-7  
Section 313

NFPA/HMIS Hazard Rating: Health (3), Flammability (2), Instability/Reactivity (0), Other (0)

HMIS Hazard Rating : Health (3), Flammability (2), Instability/Reactivity (0), PPE (D)

California Proposition 65 :  **WARNING:** This product can expose you to chemicals including Nickel compounds, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16. OTHER INFORMATION

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

Date of last issue: 2020-07-01

Date of first issue: 2013-06-13

## SECTION 1. IDENTIFICATION

Product name : Eco Solvent Ultra Cleaner  
VJ-MSINK3-CL220 / VJ-MSINK3-CL1000

### Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc  
Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042  
Telephone : 480-968-7772  
Emergency telephone : 480-968-7772  
During normal opening times

### Recommended use of the chemical and restrictions on use

Recommended use : Inkjet printing

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquid : Category 4

Skin irritation : Category 2

### GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Combustible liquid  
Causes skin irritation

Precautionary Statements : **Prevention:**  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**Response:**  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
**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.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Dipropylene Glycol Monomethyl Ether	34590-94-8	35 - 45
Diethylene glycol diethyl ether	112-36-7	35 - 45
Triethylene glycol monomethyl ether	112-35-6	15 - 25

## SECTION 4. FIRST AID MEASURES

Description of first aid measures

- 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. Seek immediate medical attention.
- 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.
- Eyes : Immediately flush with room temperature, low pressure and clean water for at least 15 minutes.  
Seek medical attention if eye irritation continues.
- Ingestion : Seek medical advice; and attention if stomach continues to be upset.  
IF SWALLOWED: Do not induce vomiting.
- Most important symptoms and effects, both acute and delayed : Skin: The liquid contact with skin may cause irritation, swelling or redness.
- Indication of any immediate medical attention and special treatment needed : Not necessary

## SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

- Suitable extinguishing media: Water spray  
Dry chemical  
Carbon dioxide (CO<sub>2</sub>)  
Alcohol-resistant foam
- Unsuitable extinguishing media : None known.
- Special 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.

## SECTION 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 materials 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.

## SECTION 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 skin, 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.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

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

ACGIH:

TLV

TWA: 100ppm

STEL: 150ppm

USA OSHA:

PEL

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, Section 5155. Airborne Contaminants)

The 8-Hour TWA Exposure Value:5 ppm

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

Exposure Controls

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

(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

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance : liquid

Color : clear

Odor : Slightly

Odor 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 : 76 °C  
Method: Seta closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Vapor density : No data available

Relative density	:	No data available
Solubility(ies)	:	Soluble
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	Less than 5 mPa·s at 20°C
Explosive properties	:	Explosive limits: 1.3~10.4v/v% as Dipropylene glycol monomethyl ether
Oxidizing properties	:	None
Particle size	:	Not applicable

## SECTION 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

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects:

Acute toxicity	:	Oral LD50: Not meet the criteria for classification according to EU Directive 1999/45/EC Dermal LD50: Not meet the criteria for classification according to EU Directive 1999/45/EC
Irritation	:	
Eye	:	Mild irritant (Rabbit, OECD 405)
Skin	:	Mild irritant (Rabbit, OECD 404)
Corrosivity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC
Sensitisation	:	
Skin	:	Not meet the criteria for classification according to EU Directive 1999/45/EC
Carcinogenicity	:	Not meet the criteria for classification according to EU Directive 1999/45/EC Not contain any substances listed in IARC Monographs (1,2A and 2B)

Mutagenicity : Not meet the criteria for classification according to EU Directive 1999/45/EC  
Negative (by Ames Test)

Toxicity for reproduction : Not meet the criteria for classification according to EU Directive 1999/45/EC

## SECTION 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

## SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods : Disposal should be in accordance with federal, state, and local requirements.  
in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## SECTION 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

## SECTION 15. REGULATORY INFORMATION

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

US Information:

TSCA Section 4(a) Final : Not regulated  
Test Rules Regulated

TSCA Section 5 Significant New Use Rule Regulation:

Ingredient : Diethylene glycol diethyl ether 112-36-7  
Reference : 40 CFR 721.10229 (Listed)

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



## TSCA Section 12(b) One-Time Export Notification Regulated:

Ingredient : Diethylene glycol diethyl ether 112-36-7  
Regulation : TSCA 5 SNUR

Clean Air Act Section 112, : Diethylene glycol diethyl ether 112-36-7  
Hazardous Air Pollutants

EPCRA (SARA Title III) : Diethylene glycol diethyl ether 112-36-7  
Section 313

NFPA/HMIS Hazard Rating: Health (1), Flammability (2), Instability/Reactivity (0), Other (0)

HMIS Hazard Rating : Health (1), Flammability (2), Instability/Reactivity (0), PPE (D)

California Proposition 65 : Not regulated

**SECTION 16. OTHER INFORMATION**

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

Date of last issue: 2020-07-01

Date of first issue: 2013-06-13

## SECTION 1. IDENTIFICATION

Product name : Eco Solvent Ultra Light Cyan  
VJ-MSINK3-LC220 / VJ-MSINK3-LC440

### Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772  
During normal opening times

### Recommended use of the chemical and restrictions on use

Recommended use : Inkjet printing

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquid : Category 4

Skin irritation : Category 2

Reproductive toxicity : Category 1B

### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Combustible liquid  
Causes skin irritation  
May damage fertility or the unborn child

Precautionary Statements : **Prevention:**  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**Response:**  
IF exposed or concerned: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of soap and water.  
**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.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
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 - 5
Tetraethylene glycol monobutyl ether	1559-34-8	1 - 5
Colorant	Trade secret	< 1

### SECTION 4. FIRST AID MEASURES

Description of first aid measures

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.

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.

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

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

### SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media: Water spray  
 Dry chemical  
 Carbon dioxide (CO2)  
 Alcohol-resistant foam

Unsuitable extinguishing media : None known.

Special 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.

### SECTION 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 materials 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.

## SECTION 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.  
Keep out of reach of children and do not drink ink.  
Do not dismantle cartridge.

Advice on general occupational hygiene : Avoid contact with skin, eyes or clothing.  
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.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Diethylene 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: 33mg/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/ face protection/ respiratory 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: : Not required under suitable use as setting the cartridge on the printer.  
hand protection & :  
others : If there is a possibility of exposure to raw ink: Wear protective gloves/ protective clothing
- (c) respiratory : Not required under suitable use as setting the cartridge on the printer under ventilation.  
protection : 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 : Not established  
controls

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- Appearance : liquid
- Color : cyan
- Odor : Slightly
- Odor 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  
Method: Seta closed cup
- Evaporation rate : No data available
- Flammability (solid, gas) : Not applicable
- Flammability (liquids) : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : 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: : No data available

n-octanol/water

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

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

Oxidizing properties : None

Particle size : Not applicable

## SECTION 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

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

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

Irritation

Eye : Mild irritant (Rabbit, OECD 405)

Skin : Mild irritant (Rabbit, OECD 404)

Corrosivity : Not meet the criteria for classification according to EU Directive 1999/45/EC

Sensitisation

Skin : Non-sensitizer (LLNA, OECD 429)

Carcinogenicity : Not meet the criteria for classification according to EU Directive 1999/45/EC  
Not contain any substances listed in IARC Monographs (1,2A and 2B)

Mutagenicity : Negative (by Ames Test)

Toxicity for reproduction : T; R61,62 for classification according to EU Directive 1999/45/EC  
Category1B for classification according to EU Directive (EC) No 1272/2008

## SECTION 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

### SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods : Disposal should be in accordance with federal, state, and local requirements.  
in accordance with applicable laws and regulations, and product characteristics at time of disposal.

### SECTION 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

### SECTION 15. REGULATORY INFORMATION

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

TSCA Section 4(a) Final : Not regulated  
Test Rules Regulated

TSCA Section 5 Significant New Use Rule Regulation:

Ingredient	: Diethylene glycol diethyl ether	112-36-7
Reference	: 40 CFR 721.10229 (Listed)	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8
Reference	: 76 FR 40850 (Proposed)	

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

TSCA Section 12(b) One-Time Export Notification Regulated:

Ingredient	: Diethylene glycol diethyl ether	112-36-7
Regulation	: TSCA 5 SNUR	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8
Regulation	: TSCA 5 Proposed SNUR	

Clean Air Act Section 112, : Diethylene glycol diethyl ether 112-36-7  
Hazardous Air Pollutants

EPCRA (SARA Title III) : Diethylene glycol diethyl ether 112-36-7  
Section 313

NFPA/HMIS Hazard Rating: Health (3), Flammability (2), Instability/Reactivity (0), Other (0)

HMIS Hazard Rating : Health (3), Flammability (2), Instability/Reactivity (0), PPE (D)

California Proposition 65 : Not regulated

## SECTION 16. OTHER INFORMATION

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

Date of last issue: 2020-07-01

Date of first issue: 2013-06-13

## SECTION 1. IDENTIFICATION

Product name : Eco Solvent Ultra Light Black  
VJ-MSINK3-LK440

### Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772  
During normal opening times

### Recommended use of the chemical and restrictions on use

Recommended use : Inkjet printing

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquid : Category 4

Skin irritation : Category 2

Reproductive toxicity : Category 1B

### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Combustible liquid  
Causes skin irritation  
May damage fertility or the unborn child

Precautionary Statements : **Prevention:**  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**Response:**  
IF exposed or concerned: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of soap and water.  
**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.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene glycol diethyl ether	112-36-7	40 - 50
Tetraethylene glycol dimethyl ether	143-24-8	10 - 20
Gamma-butyrolactone	96-48-0	< 20
Proprietary organic materials	Trade secret	5 – 10
Diethylene Glycol Methyl Ethyl Ether	1002-67-1	15 - 25
Carbon black	1333-86-4	< 1

### SECTION 4. FIRST AID MEASURES

Description of first aid measures

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.

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.

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

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

### SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media: Water spray  
 Dry chemical  
 Carbon dioxide (CO2)  
 Alcohol-resistant foam

Unsuitable extinguishing media : None known.

Special 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.

### SECTION 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 materials 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.

## SECTION 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.  
Keep out of reach of children and do not drink ink.  
Do not dismantle cartridge.

Advice on general occupational hygiene : Avoid contact with skin, eyes or clothing.  
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.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Diethylene 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: 33mg/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/ face protection/ respiratory 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: : Not required under suitable use as setting the cartridge on the printer.  
hand protection & :  
others : If there is a possibility of exposure to raw ink: Wear protective gloves/ protective clothing
- (c) respiratory : Not required under suitable use as setting the cartridge on the printer under ventilation.  
protection : 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 : Not established  
controls

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- Appearance : liquid
- Color : black
- Odor : Slightly
- Odor 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  
Method: Seta closed cup
- Evaporation rate : No data available
- Flammability (solid, gas) : Not applicable
- Flammability (liquids) : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : 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: : No data available

n-octanol/water

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

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

Oxidizing properties : None

Particle size : Not applicable

## SECTION 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

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity : Not meet the criteria for classification according to EU Directive 1999/45/EC

Irritation

Eye : Not meet the criteria for classification according to EU Directive 1999/45/EC

Skin

: Xi; R38 for classification according to EU Directive 1999/45/EC Cat.2 (classification according to EU Directive (EC) No 1272/2008)

Corrosivity

: Not meet the criteria for classification according to EU Directive 1999/45/EC

Sensitisation

Skin

: Not meet the criteria for classification according to EU Directive 1999/45/EC

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.

Mutagenicity

: Negative (by Ames Test)

Toxicity for reproduction : T; R61,62 for classification according to EU Directive 1999/45/EC  
 Category 1B for classification according to EU Directive (EC) No 1272/2008

## SECTION 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

## SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods : Disposal should be in accordance with federal, state, and local requirements.  
 in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## SECTION 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

## SECTION 15. REGULATORY INFORMATION

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

US Information:

TSCA Section 4(a) Final : Not regulated  
 Test Rules Regulated

TSCA Section 5 Significant New Use Rule Regulation:

Ingredient	: Diethylene glycol diethyl ether	112-36-7
Reference	: 40 CFR 721.10229 (Listed)	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8
Reference	: 76 FR 40850 (Proposed)	

TSCA Section 8(a) : Not regulated  
 Preliminary Assessment

## Information Rule (PAIR)

## TSCA Section 12(b) One-Time Export Notification Regulated:


Ingredient	: Diethylene glycol diethyl ether	112-36-7
Regulation	: TSCA 5 SNUR	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8
Regulation	: TSCA 5 Proposed SNUR	

Clean Air Act Section 112, : Hazardous Air Pollutants	Diethylene glycol diethyl ether Diethylene Glycol Methyl Ethyl Ether	112-36-7 1002-67-1
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EPCRA (SARA Title III) : Section 313	Diethylene glycol diethyl ether Diethylene Glycol Methyl Ethyl Ether	112-36-7 1002-67-1
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NFPA/HMIS Hazard Rating: Health (3), Flammability (2), Instability/Reactivity (0), Other (0)

HMIS Hazard Rating : Health (3), Flammability (2), Instability/Reactivity (0), PPE (D)

California Proposition 65 :  **WARNING:** This product can expose you to chemicals including Carbon black, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**SECTION 16. OTHER INFORMATION**

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

Date of last issue: 2020-07-01

Date of first issue: 2013-06-13

## SECTION 1. IDENTIFICATION

Product name : Eco Solvent Ultra Light Magenta  
VJ-MSINK3-LM220 / VJ-MSINK3-LM440

### Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772  
During normal opening times

### Recommended use of the chemical and restrictions on use

Recommended use : Inkjet printing

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquid : Category 4

Skin irritation : Category 2

Reproductive toxicity : Category 1B

### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Combustible liquid  
Causes skin irritation  
May damage fertility or the unborn child

Precautionary Statements : **Prevention:**  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Wear protective gloves/protective clothing/eye protection/face protection.  
**Response:**  
IF exposed or concerned: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of soap and water.  
**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.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
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 - 5
Tetraethylene glycol monobutyl ether	1559-34-8	1 - 5
Colorant	Trade secret	< 1

### SECTION 4. FIRST AID MEASURES

Description of first aid measures

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.

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.

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

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

### SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media: Water spray  
 Dry chemical  
 Carbon dioxide (CO2)  
 Alcohol-resistant foam

Unsuitable extinguishing media : None known.

Special 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.

### SECTION 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 materials 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.

## SECTION 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.  
Keep out of reach of children and do not drink ink.  
Do not dismantle cartridge.

Advice on general occupational hygiene : Avoid contact with skin, eyes or clothing.  
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.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Diethylene 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: 33mg/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/ face protection/ respiratory 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: : Not required under suitable use as setting the cartridge on the printer.  
hand protection & :  
others : If there is a possibility of exposure to raw ink: Wear protective gloves/ protective clothing
- (c) respiratory : Not required under suitable use as setting the cartridge on the printer under ventilation.  
protection : 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 : Not established  
controls

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- Appearance : liquid
- Color : magenta
- Odor : Slightly
- Odor 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  
Method: Seta closed cup
- Evaporation rate : No data available
- Flammability (solid, gas) : Not applicable
- Flammability (liquids) : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : 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: : No data available

n-octanol/water

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

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

Oxidizing properties : None

Particle size : Not applicable

## SECTION 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

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

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

Irritation

Eye : Moderate irritant (Rabbit, OECD 405)

Skin

: Mild irritant (Rabbit, OECD 404)  
Not meet the criteria for classification according to EU Directive 1999/45/EC  
Category2 for classification according to EU Directive (EC) No 1272/2008

Corrosivity

: Not meet the criteria for classification according to EU Directive 1999/45/EC

Sensitisation

Skin : Non-sensitizer (LLNA, OECD 429)

Carcinogenicity

: Not meet the criteria for classification according to EU Directive 1999/45/EC  
Not contain any substances listed in IARC Monographs (1,2A and 2B)

Mutagenicity

: Negative (by Ames Test)

Toxicity for reproduction

: T; R61,62 for classification according to EU Directive 1999/45/EC

Category1B for classification according to EU Directive (EC) No 1272/2008

## SECTION 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

## SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods : Disposal should be in accordance with federal, state, and local requirements.  
in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## SECTION 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

## SECTION 15. REGULATORY INFORMATION

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

TSCA Section 4(a) Final : Not regulated  
Test Rules Regulated

TSCA Section 5 Significant New Use Rule Regulation:

Ingredient	: Diethylene glycol diethyl ether	112-36-7
Reference	: 40 CFR 721.10229 (Listed)	
Ingredient	: Tetraethylene glycol dimethyl ether	143-24-8
Reference	: 76 FR 40850 (Proposed)	

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

TSCA Section 12(b) One-Time Export Notification Regulated:

Ingredient	:	Diethylene glycol diethyl ether	112-36-7
Regulation	:	TSCA 5 SNUR	
Ingredient	:	Tetraethylene glycol dimethyl ether	143-24-8
Regulation	:	TSCA 5 Proposed SNUR	

Clean Air Act Section 112, : Diethylene glycol diethyl ether 112-36-7  
Hazardous Air Pollutants

EPCRA (SARA Title III) : Diethylene glycol diethyl ether 112-36-7  
Section 313

NFPA/HMIS Hazard Rating: Health (3), Flammability (2), Instability/Reactivity (0), Other (0)

HMIS Hazard Rating : Health (3), Flammability (2), Instability/Reactivity (0), PPE (D)

California Proposition 65 : Not regulated

## SECTION 16. OTHER INFORMATION

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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.