



## Material Safety Data Sheet

Material Name: LT Ink

MSDS ID: IW-0005

### Section 1 - Chemical Product and Company Identification

**Chemical Name:** LT Ink

**Product Use:** Printing ink for Toucan LT Inkjet Printers only.

**Manufacturer Information:**

Inkware

189 Waukegan St.

Meredith, NH 03253

Emergency # 1-800-424-9300 (CHEMTREC)

#### General Comments

NOTE: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals.

For non-emergency inquiries call Inkware, LLC. at 603-279-4635. Ask for Ink Support Group.

### Section 2 - Hazards Identification

**Physical State:** Liquid

**Colors:** Cyan, Magenta, Yellow, Black, Lt-Cyan, Lt-Magenta

**Odor:** Mild Solvent Odor

**Emergency Overview**

Combustible liquid. Closed containers exposed to heat and fire may build pressure and explode.

This product is harmful by inhalation and when in contact with the skin.

**Potential Health Effects: Eyes**

Avoid contact with eyes. This product may cause irritation to the eyes. Symptoms include itching, burning, redness and tearing.

**Potential Health Effects: Skin**

Avoid contact with skin. This product may cause irritation to the skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

**Potential Health Effects: Ingestion**

Not a likely route of entry. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Potential Health Effects: Inhalation**

Avoid breathing vapors or mists of this product. This product can be harmful by inhalation. Inhalation of mists/vapors of this product may cause dizziness, nausea, and respiratory tract congestion.

**HMIS Ratings: Health: 1 Fire: 2 Physical Hazard: 0 Pers. Prot.: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

### Section 3 - Composition / Information on Ingredients

CAS #	Component	Percent
112-07-2	Ethylene glycol, monobutyl ether acetate	70-95
108-94-1	Cyclohexanone	<15
9003-22-9	VYHH	<10
Trade Secret	Cyan Pigment *	0-8
Trade Secret	Black Pigment *	0-8
Trade Secret	Yellow Pigment *	0-8
Trade Secret	Magenta Pigment *	0-8
872-50-4	1-Methyl-2-pyrrolidone ***	0-6

# Material Safety Data Sheet

Material Name: LT Ink

MSDS ID: IW-0005

## Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Glycol ethers, Flammable substances meeting the definition of risk phrase R10.

## Component Information/Information on Non-Hazardous Components

Information concerning non-hazardous ingredients, as defined by 29CFR1910.1200, is considered a Trade Secret.

## Section 4 - First Aid Measures

### First Aid: Eyes

Immediately flush eyes with large amounts of water for at least 15 minutes. Get medical attention or advice. Remove contact lenses, if possible.

### First Aid: Skin

Remove all contaminated clothing. Wash affected area(s) thoroughly with mild soap and water. If irritation develops, get medical attention. Wash contaminated clothing before reuse.

### First Aid: Ingestion

If ingested, get immediate medical attention. DO NOT induce vomiting unless instructed to do so by medical personnel. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.

### First Aid: Inhalation

Remove affected person to fresh air. Call a physician if symptoms develop or persist. If the affected person is not breathing, apply artificial respiration. Call 911 for emergency medical service.

## Section 5 - Fire Fighting Measures

### General Fire Hazards

See Section 9 - PHYSICAL & CHEMICAL PROPERTIES for Flammability Properties. Combustible liquid. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Closed containers exposed to heat and fire may build pressure and explode.

### Hazardous Combustion Products

See Section 10 - STABILITY and REACTIVITY for hazardous combustion and thermal decomposition information.

### Extinguishing Media

Dry chemical, foam, carbon dioxide.

### Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus and face mask. Use water to cool fire-exposed containers and to protect personnel.

### NFPA Ratings: Health: 1 Flammability: 2 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

## Section 6 - Accidental Release Measures

### Evacuation Procedures

Evacuate the area promptly. Isolate the spill area to prevent untrained people from entering. Remove or disable all sources of ignition. Ventilate the contaminated area. In case of large spills, follow all facility emergency response procedures.

### Containment Procedures

Contain the discharged material. Dike the spilled material, where this is possible. Do not allow the spilled product to enter public drainage system or open water courses. Cover with inert absorbent such as dry clay, sand, diatomaceous earth or commercial sorbents.

For a large spill or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors.

# Material Safety Data Sheet

Material Name: LT Ink

MSDS ID: IW-0005

## Personal Precautions

Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material.

## Clean-Up Procedures

The spill should be cleaned up by qualified personnel only.

Sweep, gather or collect up spilled material and place in covered container appropriate for disposal. Avoid the generation of dusts during clean-up. Put material in covered and labeled containers approved for transportation.

## Special Procedures

Regulations vary. Consult local authorities before disposal. Follow all Local, State, Federal and Provincial regulations for disposal.

Determine if release qualifies as a reportable incident according to local, state and federal regulations.

## Section 7 - Handling and Storage

### Handling Procedures

When using this material, do not eat, drink or smoke. Avoid getting this material into contact with your skin and eyes. Wash thoroughly after handling this product. Use this product with adequate ventilation.

Use good industrial hygiene practices when handling this material.

### Storage Procedures

Keep the container tightly closed and in a cool, well-ventilated place. Store away from sources of ignition. Store away from strong oxidizers.

Areas containing this material should have fire-safe practices and electrical equipment in accordance with Electrical and Fire Protection Codes.

## Section 8 - Exposure Controls / Personal Protection

### Exposure Guidelines

No information available for the product.

### A: Component Exposure Limits

#### Ethylene glycol, monobutyl ether acetate (112-07-2)

ACGIH: 20 ppm TWA

NIOSH: 5 ppm TWA; 33 mg/m<sup>3</sup> TWA

#### Cyclohexanone (108-94-1)

ACGIH: 20 ppm TWA

50 ppm STEL

skin - potential for cutaneous absorption

OSHA: 25 ppm TWA; 100 mg/m<sup>3</sup> TWA

Prevent or reduce skin absorption

NIOSH: 25 ppm TWA; 100 mg/m<sup>3</sup> TWA

Potential for dermal absorption

#### Black Pigment \* (Trade Secret)

ACGIH: 3.5 mg/m<sup>3</sup> TWA

OSHA: 3.5 mg/m<sup>3</sup> TWA

NIOSH: 3.5 mg/m<sup>3</sup> TWA; 0.1 mg/m<sup>3</sup> TWA (as PAH, carbon black in presence of polycyclic aromatic hydrocarbons)

### Engineering Controls

Provide adequate local exhaust ventilation at transfer points and open containers. Use general dilution and local exhaust ventilation to effectively remove and prevent buildup of any vapors, mists or spray generated from the handling/processing of this product.

If ventilation is not adequate, use respiratory protection equipment.

# Material Safety Data Sheet

Material Name: LT Ink

MSDS ID: IW-0005

## PERSONAL PROTECTIVE EQUIPMENT

### PPE: Eyes/Face

Avoid contact with eyes. Wear safety glasses with side shields.

Chemical goggles are recommended when splash potential exists. Use of full face shield is also recommended.

### PPE: Skin

Avoid contact with skin. Select and use gloves and/or protective clothing to prevent skin contact. Consult with glove/clothing manufacturer for selection and compatibility testing of appropriate materials.

Normal work clothing (long sleeved shirts and long pants) is recommended.

### PPE: Respiratory

Under normal conditions, respirator is not normally required. If ventilation is not sufficient to effectively prevent buildup of vapor, mist, fume or dust, appropriate NIOSH/MSHA respiratory protection must be provided.

### PPE: General

Use good industrial hygiene practices when handling this material. When using this material, do not eat, drink or smoke. Wash thoroughly after handling this product.

## Section 9 - Physical & Chemical Properties

<b>Appearance:</b>	Colored Liquid	<b>Odor:</b>	Mild Solvent Odor
<b>Physical State:</b>	Liquid	<b>pH:</b>	not determined
<b>Vapor Pressure:</b>	<3.0 mmHg	<b>Vapor Density:</b>	>3.0 (air=1)
<b>Boiling Point:</b>	>310°F (>154.4 °C)	<b>Melting Point:</b>	not determined
<b>Solubility (H2O):</b>	moderate	<b>Specific Gravity:</b>	0.95-0.97
<b>Freezing Point:</b>	not determined	<b>Evaporation Rate:</b>	<1.0 (BuAc=1.0)
<b>VOC:</b>	7.1 - 7.4 lb/gal	<b>Octanol/Water Coeff.:</b>	not determined
<b>Flammability Limit - UFL:</b>	<9.0%	<b>Flammability Limit - LFL:</b>	>0.5%
<b>Flash Point Method:</b>	closed cup	<b>Flash Point:</b>	145 - 155 °F (62.8-68-3 °C)
<b>Auto Ignition:</b>	>600 °F (>315.5°C)		

### Physical Properties: Additional Information

Call INKWARE for specific VOC values per color.

## Section 10 - Chemical Stability & Reactivity Information

### Chemical Stability

Stable when stored under proper conditions. See SECTION 7 - Handling & Storage.

### Chemical Stability: Conditions to Avoid

Keep away from heat, sparks, or open flame. Avoid oxidizing agents.

### Incompatibility

This product may react with oxidizing agents.

### Hazardous Decomposition

Carbon monoxide, carbon dioxide and other hydrocarbon fragments.

### Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

## Section 11 - Toxicological Information

### Acute Dose Effects

Toxicology studies on humans and/or animals have not been conducted on this product/product family.

### Component Analysis - LD50/LC50

#### Ethylene glycol, monobutyl ether acetate (112-07-2)

Oral LD50 Rat: 2400 mg/kg; Oral LD50 Mouse: 3200 mg/kg; Dermal LD50 Rabbit: 1500 mg/kg

# Material Safety Data Sheet

Material Name: LT Ink

MSDS ID: IW-0005

## Cyclohexanone (108-94-1)

Inhalation LC50 Rat: 8000 ppm/4H; Oral LD50 Rat: 1620 µL/kg; Oral LD50 Mouse: 1400 mg/kg; Dermal LD50 Rabbit: 1 mL/kg

## Magenta Pigment \* (Trade Secret)

Oral LD50 Rat: >20 mL/kg

## Black Pigment \* (Trade Secret)

Oral LD50 Rat: >15400 mg/kg; Dermal LD50 Rabbit: >3 g/kg

## 1-Methyl-2-pyrrolidone \*\*\* (872-50-4)

Oral LD50 Rat: 3914 mg/kg; Oral LD50 Mouse: 5130 mg/kg; Dermal LD50 Rabbit: 8 g/kg

## Carcinogenicity

No carcinogenicity data available for this product.

## Component Carcinogenicity

### Ethylene glycol, monobutyl ether acetate (112-07-2)

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans

### Cyclohexanone (108-94-1)

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans

IARC: Monograph 71, 1999; Monograph 47, 1989 (Group 3 (not classifiable))

### VYHH (9003-22-9)

IARC: Supplement 7, 1987; Monograph 19, 1979 (Group 3 (not classifiable))

### Black Pigment \* (Trade Secret)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

NIOSH: potential occupational carcinogen (in presence of polycyclic aromatic hydrocarbons)

IARC: Monograph 65, 1996 (Group 2B (possibly carcinogenic to humans))

## Target Organ Effects

No information available for the product.

## Section 12 - Ecological Information

## Ecotoxicity

Environmental toxicity and/or biodegradation studies have not been conducted on this product/product family.

## Component Analysis - Ecotoxicity - Aquatic Toxicity

### Ethylene glycol, monobutyl ether acetate (112-07-2)

Test & Species	Conditions
72 Hr EC50 freshwater algae (Scenedesmus subspicatus)	>500 mg/L
48 Hr EC50 water flea	37 mg/L

### Cyclohexanone (108-94-1)

Test & Species	Conditions
96 Hr LC50 fathead minnow	527.0 mg/L
96 Hr LC50 rainbow trout	90.0 mg/L
96 Hr LC50 rainbow trout	44.0 mg/L
96 Hr EC50 freshwater green algae (Chlorella vulgaris)	20 mg/L

# Material Safety Data Sheet

Material Name: LT Ink

MSDS ID: IW-0005

5 min EC50 Photobacterium phosphoreum	25 mg/L
10 min EC50 Photobacterium phosphoreum	21.3 mg/L
48 Hr EC50 water flea	820 mg/L

## 1-Methyl-2-pyrrolidone \*\*\* (872-50-4)

Test & Species	Conditions
96 Hr LC50 water flea	3135 mg/L

## Section 13 - Disposal Considerations

### US EPA Waste Number & Descriptions

#### A: General Product Information

Discarded material is not expected to be a characteristic hazardous waste under RCRA.  
This product contains a component identified as hazardous under 40 CFR 261.

#### B: Component Waste Numbers

##### Cyclohexanone (108-94-1)

RCRA: waste number U057 (Ignitable waste)

### Disposal Instructions

Do not allow this material to be discharged into storm drains, sewers or any public/private waterway.  
Discarded product and/or wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.  
Regulations vary. Consult local authorities before disposal. Dispose of waste material according to all Local, State, Federal, and Provincial Environmental Regulations.

## Section 14 - Transportation Information

### International Transportation Regulations

This product, as packaged by manufacturer, is not regulated as a DOT hazardous material as defined in 49CFR173.150 (b), (b)(3) - Exceptions for Limited Quantities.  
Transportation classifications are subject to change with changes in package size. Consult shipper requirements under DOT (49 CFR) and I.A.T.A. regulations to assure regulatory compliance.

### US DOT Information

**Shipping Name:** Not regulated as hazardous material.

### IATA Information

**Shipping Name:** Not regulated as dangerous goods.

## Section 15 - Regulatory Information

### US Federal Regulations

No information available for the product.

# Material Safety Data Sheet

Material Name: LT Ink

MSDS ID: IW-0005

## Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

### Ethylene glycol, monobutyl ether acetate (112-07-2)

SARA 313: 1.0 % de minimis concentration (applies to R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OR' ethers, where n = 1,2, or 3, R=alkyl C7 or less or R = phenyl or alkyl substituted. phenyl, R' = H or alkyl C7 or less, or OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate, Chemical Category N230) (related to Glycol ethers)

### Cyclohexanone (108-94-1)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

### 1-Methyl-2-pyrrolidone \*\*\* (872-50-4)

SARA 313: 1.0 % de minimis concentration

Acute Health: no Chronic Health: no Fire: yes Pressure: no Reactive: no

## State Regulations

### A: General Product Information

This product does not meet the definition of photochemically reactive as defined under Rule 102 of California SCQMD. Contact your state regulatory agency if more information is required.

### B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Ethylene glycol, monobutyl ether acetate ('related to Glycol ethers)	112-07-2	No	No	No	No	Yes 1	No
Cyclohexanone	108-94-1	Yes	Yes	Yes	Yes	Yes	Yes
Black Pigment *	Trade Secret	Yes	Yes	Yes	Yes	Yes	Yes
1-Methyl-2-pyrrolidone ***	872-50-4	No	Yes	Yes	No	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

## Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Cyclohexanone	108-94-1	0.1 % (English Item 467, French Item 603)
Black Pigment *	Trade Secret	1 % (English Item 309, French Item 1271)

## Additional Regulatory Information

# Material Safety Data Sheet

Material Name: LT Ink

MSDS ID: IW-0005

## Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Ethylene glycol, monobutyl ether acetate	112-07-2	Yes	DSL	EINECS
Cyclohexanone	108-94-1	Yes	DSL	EINECS
Magenta Pigment *	Trade Secret	Yes	DSL	EINECS
Yellow Pigment *	Trade Secret	Yes	DSL	EINECS
VYHH	9003-22-9	Yes	DSL	No
Black Pigment *	Trade Secret	Yes	DSL	EINECS
Cyan Pigment *	Trade Secret	Yes	DSL	EINECS
1-Methyl-2-pyrrolidone ***	872-50-4	Yes	DSL	EINECS

## Section 16 - Other Information

### Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State, Provincial and local laws.

**This product is for industrial or professional use only.**

This MSDS has been prepared to meet the OSHA Hazard Communication Standard 29 CFR 1910.1200 and follows the format of ANSI Z400-2004.

### MSDS History

Revisions:

1. Original Release.

### Key/Legend

\* Applies only to appropriate color ink.

\*\*\* Applies only to magenta ink

ACGIH = American Conference of Governmental Industrial Hygienists.

NIOSH = National Institute of Occupational Safety and Health.

OSHA = Occupational Safety and Health Administration.

CMRG = Chemical Manufacturer Recommended Guideline.

AIHA = American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

End of Document IW-0005