



Product Name: UVink LF-140 Black

MSDS No.031-37U07KC

First issue: 2011/08/29

Revised: 2012/02/24

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# Material Safety Data Sheets

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

## 1. Product and Company Identification

Product Name	: UVink LF-140 Black
Product Code	: SPC-0727K, SPC-0728K
General Use	: Ink for ink jet printer
Product Description	: UV curable ink
MSDS Number	: 031-37U07KC
Manufacture	
Company Name	: Mimaki Engineering Co., Ltd
Address	: 2182-3 Otsu, Shigeno, Tomi-shi, Nagano 389-0512 Japan
Telephone No.	: +81-268-64-2413
Importer/Distributor Established in USA	
Company Name	: MIMAKI USA. INC.
Address	: 150 Satellite Boulevard, suite A, Suwanee, Georgia 30024, U.S.A
Telephone No.	: 1-678-730-0100
Emergency Telephone No.	: +81-268-64-2413

## 2. Hazards Identification

Emergency Overview	<ul style="list-style-type: none"><li>• May be harmful if swallowed</li><li>• May be harmful in contact with skin</li><li>• Causes skin irritation</li><li>• May cause an allergic skin reaction</li><li>• Causes serious eye irritation</li><li>• May cause harm to breast-fed children</li><li>• Very toxic to aquatic life</li></ul>
Potential Health Effects	
Inhalation	: May be harmful if swallowed
Eye Contact	: Causes serious eye irritation.
Skin Contact	: May be harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction.
Potential Environmental Effects	: Very toxic to aquatic life.

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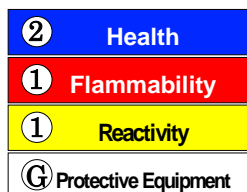
HMIS Rating (scale 0 – 4)

Health = 2

Flammability= 1

Reactivity = 1

Protective Equipment = G



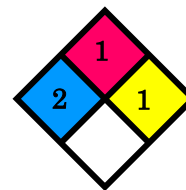
NFPA Rating (scale 0 – 4)

Health = 2

Flammability = 1

Instability =1

Special =None



## 3. Composition / Information On Ingredients

No	Chemical Name	Wt%	CAS No.	Chemical Formula
1	Acrylic ester	75-95	Registered	Trade secret
2	Photo initiator	10-15	Registered	Trade secret
3	Carbon black	0.1-5	Registered	Trade secret
4	Additives	0.1-5	Registered	Trade secret

## 4. First Aid Measures

Inhalation	: If inhaled, immediately remove to fresh air and keep warm and calm. If breathing irregularly or not breathing, give artificial respiration and consult a doctor immediately.
Skin contact	: Wash skin thoroughly with plenty of water. If on clothing, remove immediately contaminated clothing. The product don't evaporate therefore staying on the skin or clothing for a long time. If no washing or no taking off the clothing, it may cause inflammation on the skin.
Eye contact	: Flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Consult an ophthalmologist immediately.
Ingestion	: Do not induce vomiting. If swallowed, keep calm and consult a doctor immediately. Keep from swallowing vomit.
Concise statement on the most important symptom	: No relevant information found.



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Protection to : Wear tools for appropriate protection.

first-aiders Ventilate.

See section 7 and 8.

Note to physician : See section 7 and 8.

### 5. Fire Fighting Measures

Extinguishing media : Foam, carbon dioxide, dry chemical, water spray. Never splash water.

Hazard in fire : Avoid breathing combustion products.

Fire-fighting procedures : Eliminate ignition sources. Stay upwind. Keep people away. Keep wetted with water surrounding equipment. Avoid discharge chemical substances to rivers and sewers.

Protection to firefighters : Wear tools for appropriate protection.

### 6. Accidental Release Measures

Personal precautions : Wear tools for appropriate protection. Keep unnecessary and unprotected personnel from entering in vicinity of spill. Ventilate. See section 8.

Environmental precautions : Avoid discharge to rivers and environmental effects.

Steps to be taken if material is spilled : Small spills: Absorb with nonflammable absorbent such as dry sand and dirt. Large spills: Pump spills into a sealing container and remove to safe place. Use non-sparking equipment during recovery operation and ground equipment. See section 13, Disposal Considerations, for disposing of waste.

Second-accident precautions : Prepare proper fire extinguishers and eliminate all sources of ignition in vicinity of spill. Avoid walking on the spills. Use safety tools to prevent sparks.

### 7. Handling And Storage

Handling : Handle in well-ventilated area. Prohibit use of fire, sparks and heat source. Use antistatic clothing and shoes. Ground equipment against electrostatics and use spark-proof tools. Keep from increasing of temperature for flammable substance. Use

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local exhaust system and proper protection if working in closed area. Use proper protection (gloves, masks, aprons, goggles, etc.)

**Storage** : Keep container tightly closed, store at cool and aired place, open and handle carefully. Protect from light. Protect from heat/overheating. Avoid contact with peroxides or other free radical initiators.

## 8. Exposure Controls / Personal Protection

### 8.1. Exposure limit values

No	Chemical Name		TWA	STEL	Ceiling	Skin	SEN
1	Carbon Black	2000/39/EC	N.E.	N.E.	N.E.	N.E.	N.E.
		ACGIH TLV	3.5mg/m <sup>3</sup>	N.E.	N.E.	N.E.	N.E.

### 8.2. Exposure controls

**Engineering controls** : Use explosion-proof equipment if handle in volume. Use exhaust system to prevent vapor build-up. Keep heat or fire sources from handling area. If working indoors, use proper equipment to protect workers from direct exposure or use local exhaust system to protect workers from exposure.

**Respiratory protection** : Wear protective masks for hazardous materials.



**Hand protection** : Wear gloves resistant to organic solvents and chemicals.



**Eye protection** : Wear chemical goggles.



**Skin protection** : Wear clothing to protect skin from direct exposure. Wear protective clothing resistant to chemicals.

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### 9. Physical And Chemical Properties

Appearance (physical state/ color etc)	: Liquid (25°C) / black
Odor	: Characteristic odor
Odor threshold	: Not available
pH	: Not available
Melting point/freezing point	: Not available
Initial boiling point and boiling range	: Not available
Flash point	: >93°C
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Upper/lower flammability or explosive limits	: Not available
Vapor pressure	: Not available
Vapor density	: Not available
Relative density	: 1.07(25°C)
Solubility	: Not available
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
Viscosity	: $23 \pm 3$ mPa·s (25°C)
VOC	: Not available
Solvent content	: Organic solvents $\leq 0.5$ Wt%
water amount	: $\leq 0.7$ Wt%

### 10. Stability And Reactivity

Stability	: Stable under the usual handling condition.
Condition to avoid	: Excessive heat and cold, sparks, ignition sources, light and high humidity. May result in polymerization.
Materials to avoid	: Oxidant, explosive substances, catalysts, alkaline, free radical initiators.
Hazardous decomposition products	: To burn this product may be produce toxic gases such as CO and low-molecular-weight monomers.
Other	: Plastic and rubbers might be melted.

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### 11. Toxicological Information

#### [ACUTE TOXICITY]

Oral:	Rats LD50 >2,000mg/kg: Category 5
Dermal:	Rabbit LD50 >2,000mg/kg: Category 5

#### [CARCINOGENICITY]

Carbon black	IARC category 2B (Not possible to classify as a printing ink)
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[OTHERS]	Not available
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### 12. Ecological Information

General notes	: Handling is noted because it might influence the environment when leaking and abandoning it. Especially, note that the product doesn't flow directly to ground, the river, and the drain ditch.
Ecological toxicity	: Hazardous to the aquatic environment Acute hazard L(E)C50 <1.00mg/L: Category 1
Persistence and degradability	: Not available
Bioaccumulative Potential	: Not available
Mobility	: Not available

### 13. Disposal Considerations

- Have waste inks, containers and other materials disposed by licensed industrial waste disposer.
- Do not dump drainage flushed containers and equipment into sewers, on the ground.
- Dispose of wastes from drainage or incineration, in compliance with the laws and regulations.
- Adsorb to diatom earth and others to dispose waste inks, and use open incinerator.
- Dispose of wastes by licensed industrial waste disposer to comply with the local laws and regulations.
- Empty inks and other materials out of containers if disposed.

### 14. Transport Information

Check a thing without a leak in a container.

Perform prevention of collapse of cargo surely.

LAND TRANSPORT



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ADR, RID	Class	: 9 Miscellaneous dangerous substances and articles
	Packing Group (PG)	: III
	Classification code	: M6
	Hazard Identification No.	: 90
	UN Number	: 3082
	Hazard label	: 9
	Name and description	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
	Transport category	: 3
	(Tunnel restriction code)	(E)

### SEA TRANSPORT

IMDG	Class	: 9
	Packing Group (PG)	: III
	UN Number	: 3082
	Hazard label	: 9
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

### AIR TRANSPORT

ICAO/IATA	Class	: 9
	Packing Group (PG)	: III
	Passenger and Cargo Limited	: Y964
	Quantity Packing Instructions	
	Packing Instructions (Passenger)	: 964
	Packing Instructions (Cargo)	: 964
	UN Number	: 3082
	Hazard label	: 9
	Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s.

## 15. Regulatory Information

TSCA Status : All components on TSCA INVENTORY.

### SARA Title III

Section 311/312 : Fire Hazard: No  
(40 CFR 370) Pressure Hazard: No  
Reactivity Hazard: No



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Immediate Hazard: Yes

Delayed Hazard: Yes

California Proposition 65 : This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity.

### 16. Other Information

#### References

International Chemical Safety Cards (ICSC)

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

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

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

#### Revision history

Version	Date	Content
1.0	2011/08/29	First issue.
2.0	2012/02/24	Revised 3, 8 and 9.