

Safety Data Sheets

1. Identification

Product Name	: UV ink Black
Order No.	: SPC-0371K-2
General Use	: For ink jet
Product Description	: UV curable ink
SDS Number	: 037-U010377
Manufacture	
Company Name	: Mimaki Engineering Co., Ltd.
Address	: 2182-3 Shigeno-otsu, 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.	: +1-678-730-0700
Emergency Telephone No.	: +81-268-64-2281

2. Hazards Identification

[GHS Classification]

Physical Hazards

Flammable Liquids : Not classified

Health Hazards

Skin Corrosion / Irritation : Category 2

Eye Damage / Irritation : Category 2

Carcinogenicity : Category 2

Specific Target Organ Toxicity : Category 3 (respiratory tract irritation)
(Single Exposure)

Specific Target Organ Toxicity : Category 1
(Repeated Exposure)

The above list does not include category being non-classifiable or not-applicable.

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[GHS Label Elements]

Symbol



Signal Word

Danger

Hazard Statements

H315 Cause skin irritation

H319 Cause serious eye irritation

H335 May cause respiratory irritation

H351 Suspected of causing cancer

H372 Causes damage to organs through prolonged or repeated exposure

Precautionary Statements

[Prevention]

P201 Obtain SDS (Safety Data Sheet) and printer's operation manual before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe /gas/mist.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

[Response]

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash before reuse.

[Storage]

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

[Disposal]

P501 Dispose of contents/container in accordance with

local/regional/national/international regulation (to be specified).

Other Information

[Hazards not otherwise classified (HNOC)]

Not Applicable

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[Other hazards]

- Toxic to aquatic life with long lasting effects
- Toxic to aquatic life

[Unknown Acute Toxicity]

82% of the mixture consists of ingredient(s) of unknown toxicity

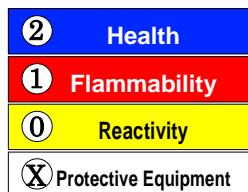
HMIS Rating (scale 0 – 4)

Health = 2

Flammability = 1

Reactivity = 0

Protective Equipment = X



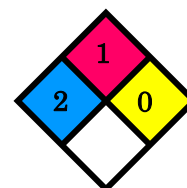
NFPA Rating (scale 0 – 4)

Health = 2

Flammability = 1

Instability = 0

Special = -



CANADIAN WHMIS SYMBOLS : D2A - Very toxic materials



3. Composition / Information on Ingredients

No	Chemical Name	Wt%	CAS No.
1	Monomers	65-75	Trade Secret
2	Isooctyl acrylate (structure unspecified)	5-15	29590-42-9
3	Photoinitiator	5-10	Trade Secret
4	1-Butanone, 2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]- 2-(phenylmethyl)-	1-5	119313-12-1
5	Carbon black	1-5	1333-86-4
6	Oligomer	1-5	Trade Secret
7	Additives	1-5	Trade Secret
8	Copper compounds	0.1-1	Trade Secret

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4. First Aid Measures

General advice	: If symptoms persist, call a physician.
Inhalation	: Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.
Eye Contact	: Rinse immediately with plenty of water and seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing.
Skin Contact	: If skin irritation persists, call a physician. Wash off immediately with soap and plenty of water. Wash contaminated clothing before reuse.
Ingestion	: If swallowed, call a poison control center or physician immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
Protection To First-Aiders	: Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms : Not Available

Indication of any immediate medical attention and special treatment needed

Note to physicians : Treat symptomatically.

5. Fire Fighting Measures

Flammable Properties	: Flash point ; 131 °C / 268 ° F Explosion data ; No data available
Extinguishing Media	: Dry chemical, CO ₂ , water spray or alcohol-resistant foam.
Unsuitable Extinguishing Media	: Straight streams.
Specific hazards arising from the chemical	: In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

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Fire Fighting : As in any fire, wear self-contained breathing apparatus
 Instructions : pressure-demand, MSHA/NIOSH (approved or equivalent) and full
 protective gear.

6. Accidental Release Measures

Personal Precautions : Use personal protection recommended in Section 8. Avoid contact
 with eyes and skin. Keep people away from and upwind of spill/leak.
 Environmental : Collect spillage. Prevent entry into waterways, sewers, basements
 precautions or confined areas. Do not flush into surface water or sanitary sewer
 system.
 Methods for containment : Absorb or cover with dry earth, sand or other non-combustible
 material and transfer to containers.
 Methods for cleaning up : Use personal protective equipment as required. Soak up with inert
 absorbent material. Pick up and transfer to properly labeled
 containers. Clean contaminated surface thoroughly.

7. Handling and Storage

Handling : Use personal protection recommended in Section 8. Avoid contact
 with skin and eyes. Do not breathe gas/mist.
 Storage : Keep out of the reach of children. Keep in properly labeled containers.
 Keep containers tightly closed in a cool, well-ventilated place. Avoid
 direct sunlight or high temperature. Store locked up.
 Incompatible materials : Strong oxidizing agents.

8. Exposure Controls / Personal Protection

Exposure Limit Values

No	Chemical Name	ACGIH	OSHA PEL	NIOSH IDLH
1	Carbon black	TWA: 3 mg/m ³ inhalable fraction	TWA: 3.5 mg/m ³ (vacated) TWA: 3.5 mg/m ³	IDLH: 1750 mg/m ³ TWA: 3.5 mg/m ³ TWA: 0.1 mg/m ³ Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

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2	Copper compounds	TWA: 1 mg/m ³ Cu dust and mist	N.E.	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist
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NIOSH IDLH Immediately Dangerous to Life or Health

Other Information : Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Exposure Controls

Occupational Exposure Controls

Engineering Controls : Showers
Eyewash stations
Ventilation systems.

Personal Protection

Respiratory Protection : Consult with a health and safety professional for specific respirators appropriate for your use.



Vapor Respirator

Hand Protection : Gloves made of plastic or rubber.



Gloves

Eye Protection : Tight sealing safety goggles. Face protection shield.



Safety Glasses

Skin Protection : Suitable protective clothing. Apron. Gloves made of plastic or rubber.



Protective Apron

General Hygiene Considerations

: When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended. Wash face, hands and any exposed skin thoroughly after handling.

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Environmental Exposure Controls

: Not available

9. Physical and Chemical Properties

Appearance	- Physical State	: liquid
	- Color	: Black
Odor		: Characteristic odor
Boiling Point / Boiling Range		: Not Available
Melting Point / Melting Range		: Not Available
Decomposition Temperature		: Not Available
Flash Point		: 131°C / 268° F (Cleveland Open Cup)
Auto ignition temperature		: Not Available
Upper / Lower Flammability or Explosive Limits		: Not Available
Vapor Pressure		: Not Available
Specific Gravity		: 1.0-1.1g/cm ³ (25 °C)
Solubility		: Not Available
Water Solubility		: Immiscible in water
Viscosity		: <30 mPa·s (25 °C)
VOC		: Not Available

10. Stability and Reactivity

Conditions to Avoid	: Extremes of temperature and direct sunlight.
Reactivity	: No reactivity under the normal usage
Stability	: Stable under recommended storage conditions.
Materials to Avoid	: Strong oxidizing agents.
Possibility of Hazardous Reactions	: None under normal processing.
Decomposition Products	: Thermal decomposition can lead to release of irritating and toxic gases and vapors.

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11. Toxicological Information

Acute Toxicity : 82% of the mixture consists of ingredient(s) of unknown toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Isooctyl acrylate (structure unspecified)	> 5 g/kg (Rat)	-	-

Eye Irritation : Category 2 as a product.

Skin Irritation : Category 2 as a product.

Sensitization : Not Available

Specific Target Organ : Category 3 (respiratory tract irritation) as a product.

Toxicity(Single Exposure)

Specific Target Organ : Category 1 as a product.

Toxicity(Repeated

Exposure)

Chronic Toxicity : Avoid repeated exposure.

Carcinogenicity : Category 2 as a product. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Carbon black	A3	Group 2B	-	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

12. Ecological Information

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.

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Ecotoxicity : Toxic to aquatic life with long lasting effects. Toxic to aquatic life.
83% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Fish	Crustaces
Isooctyl acrylate (structure unspecified)	0.67: 96 h Pimephales promelas mg/L LC50	0.4: 48 h Daphnia magna mg/L EC50

Persistence and : Not Available

Degradability

Bioaccumulative : Not Available

Potential

Other Adverse Effects : Not Available

13. Disposal Considerations

: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Do not dump this product into sewers, on the ground or into any body of water.

14. Transport Information

Check a thing without a leak in a container.

Perform prevention of collapse of cargo surely.

Us Department of Transportation (DOT)

UN Number : UN3082

Proper Shipping : Environmentally hazardous substance, liquid, n.o.s.

Name (Isooctyl acrylate, 1-Butanone,
2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-)

Hazardous Class : 9

Packing Group (PG) : III

Special Provisions : 8, 146, 173, 335, IB3, T4, TP1, TP29

Marine pollutant : Not Applicable

Emergency Response : 171

Guide Number

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Description : UN3082, Environmentally hazardous substance, liquid, n.o.s.
(Isooctyl acrylate, 1-Butanone,
2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-),
9, III

TDG

UN Number : UN3082
Proper Shipping : Environmentally hazardous substance, liquid, n.o.s.
Name (Isooctyl acrylate, 1-Butanone,
2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-)
Hazardous Class : 9
Packing Group (PG) : III
Special Provisions : none
Marine pollutant : Not regulated
Description : UN3082, Environmentally hazardous substance, liquid, n.o.s.
(Isooctyl acrylate, 1-Butanone,
2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-),
9, III

MEX

UN Number : UN3082
Proper Shipping : Environmentally hazardous substance, liquid, n.o.s.
Name (Isooctyl acrylate, 1-Butanone,
2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-)
Hazardous Class : 9
Special Provisions : none
Packing Group (PG) : III
Description : UN3082, Environmentally hazardous substance, liquid, n.o.s.
(Isooctyl acrylate, 1-Butanone,
2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-),
9, III

IATA

UN Number : UN3082
Proper Shipping : Environmentally hazardous substance, liquid, n.o.s.
Name (Isooctyl acrylate, 1-Butanone,
2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-)
Hazardous Class : 9
Packing Group (PG) : III

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ERG Code : 9L
Special Provisions : A97, A158
Description : UN3082, Environmentally hazardous substance, liquid, n.o.s.
(Isooctyl acrylate, 1-Butanone,
2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-),
9, III

Sea Transport (IMDG)

UN Number : UN3082
Proper Shipping : Environmentally hazardous substance, liquid, n.o.s.
Name (Isooctyl acrylate, 1-Butanone,
2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-)
Hazardous Class : 9
Packing Group (PG) : III
EmS-No. : F-A, S-F
Special Provisions : 274, 335
Marine Pollutant : This material meets the definition of a marine pollutant
Description : UN3082, Environmentally hazardous substance, liquid, n.o.s.
(Isooctyl acrylate, 1-Butanone,
2-(dimethylamino)-1-[4-(4-morpholinyl)phenyl]-2-(phenylmethyl)-),
9, III
Environmental hazard : Yes

Remarks : Single or inner packaging less than 5 L (liquid) or 5 kg net (solids) is
excepted from Dangerous Goods regulations.
Refer to ICAO/IATAA197, IMDG 2.10.2.7, ADR SP 375.

15. Regulatory Information

U.S. Federal Regulations

CERCLA : This material, as supplied, does not contain any substances regulated
Reportable Quantity as hazardous substances under the Comprehensive Environmental
(40 CFR 302) Response Compensation and Liability Act (CERCLA) (40 CFR 302) or
the Superfund Amendments and Reauthorization Act (SARA) (40
CFR 355). There may be specific reporting requirements at the local,
regional, or state level pertaining to releases of this material



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SARA Title III

Section 311/312 : Acute health hazard Yes
 (40 CFR 370) Chronic Health Hazard No
 Fire hazard No
 Sudden release of pressure hazard No
 Reactive Hazard No

Section 313 : Section 313 of Title III of the Superfund Amendments and
 (40 CFR 372) Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act) : This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

U.S. State Regulations

California Proposition 65 : This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Carbon black (1333-86-4)	Carcinogen

U.S.State Right-to-Know Regulations : This product contains substances regulated by state right-to-know regulations.

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Carbon black (1333-86-4)	X	X	X

U.S.EPA Label Information

EPA Pesticide : Not Applicable

Registration Number

Canada : This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR

WHMIS Hazard Class : D2A - Very toxic materials

Others : Please refer to any other federal, state and local regulations.

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16. Other Information

References

- 1) LOLI Database (ChemADVISOR, Inc.)
- 2) Japan National Institute of Technology and Evaluation
- 3) EU CLP(1272/2008)Annex VI Table 3.1

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