Safety Data Sheets

1. Identification

Product Name	: LUS-120 Black
Order No.	: LUS12-K-BA / LUS12-K-B2
Ink Ver.	: 2
General Use	: Ink jet printing ink
Product Description	: UV Inkjet Ink
SDS Number	: 037-U110349
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 NE, suite A, Suwanee, Georgia 30024, U.S.A.
Telephone No.	: +1-678-730-0170
Emergency Telephone No.	: +81-268-64-2281

2. Hazards Identification

[GHS Classification]

Physical Hazards

Flammable Liquids	: Not classified

Health Hazards

Sensitization – Skin	: Category 1
Carcinogenicity	: Category 2
Toxic to Reproduction	: Category 2
Specific Target Organ Toxicity (Repeated Exposure)	: Category 1 (lungs)

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

[GHS Label Elements]

Symbol

Signal Word
Danger

Hazard Statements
H317 May cause an allergic skin reaction
H351 Suspected of causing cancer
H361 Suspected of damaging fertility or the unborn child
H372 Causes damage to organs through prolonged or repeated exposure (lungs)

Precautionary Statements
[Prevention]
P201 Obtain SDS (Safety Data Sheet) and printer's manual instructions 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.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
[Response]
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash before reuse.
[Storage]
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

[Other hazards]

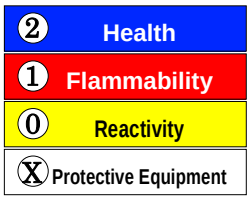
Not Applicable

[Unknown Acute Toxicity]

98.4% of the mixture consists of ingredient(s) of unknown toxicity

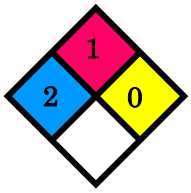
HMIS Rating (scale 0 – 4)

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

3. Composition / Information on Ingredients

Common name and synonyms: No data available

Pure substance/mixture: Mixture

No	Chemical Name	Wt%	CAS No.
1	Monomers	80-90	Trade Secret
2	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	5-10	75980-60-8
3	Photoinitiator	1-5	Trade Secret
4	Phosphine oxide, phenylbis(2,4,6-trimethylbenzoyl)-	1-5	162881-26-7
5	CARBON BLACK	1-5	1333-86-4
6	Additives	1-5	Trade Secret
7	Others	<1	Trade Secret
8	Copper compounds	<1	Trade Secret

4. First Aid Measures

General advice : If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

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.

Self-protection of the first aider : Use personal protective equipment as required.

[Most important symptoms and effects, both acute and delayed]

Symptoms	: No data available.

[Indication of any immediate medical attention and special treatment needed]

Note To Physician	: May cause sensitization of susceptible persons.

5. Fire Fighting Measures

Flammable Properties	: Flash point : 95℃/ 203° F
Extinguishing Media	: Dry chemical, CO2, water spray or alcohol-resistant foam.
Unsuitable Extinguishing Media	: Do not use a solid water stream as it may scatter and spread fire.
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.
Explosion data	: Sensitivity to Mechanical Impact; No data available. Sensitivity to Static Discharge; No data available.
Protective equipment and precautions for firefighters	: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. If impossible to extinguish, protect surroundings and allow fire to burn itself out.

6. Accidental Release Measures

[Personal precautions, protective equipment and emergency procedures]

Personal Precautions	: Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

[Environmental precautions]

Environmental precautions	: Collect spillage. Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment.

[Methods and material for containment and cleaning up]

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. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surfacethoroughly.

7. Handling and Storage

[Precautions for safe handling]

Advice on safe handling : Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

[Conditions for safe storage, including any incompatibilities]

Storage Conditions : 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	OSHA PEL	ACGIH TWA	NIOSH IDLH
1	Carbon black 1333-86-4	TWA: 3.5 mg/m^3 (vacated) TWA: 3.5 mg/m^3	TWA: 3 mg/m3 inhalable particulate matter	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
2	Copper compounds	-	TWA: 1 mg/m3 Cu dust and mist	IDLH: 100 mg/m^3 Cu dust and mist TWA: 1 mg/m^3 Cu dust and mist

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).

[Appropriate engineering controls]

Engineering Controls : Showers
Eyewash stations
ventilation systems

[Individual protection measures, such as personal protective equipment]

Hand Protection	: Gloves made of plastic or rubber.
Eye/face protection	: Tight sealing safety goggles. Face protection shield.
Skin and body protection	: Suitable protective clothing. Apron. Gloves made of plastic or rubber.
General Hygiene Considerations	: Regular cleaning of equipment, work area and clothing is recommended. When using do not eat, drink or smoke. Wash face, hands and any exposed skin thoroughly after handling.

9. Physical and Chemical Properties

[Information on basic physical and chemical properties]

Appearance	- Physical State	: liquid
	- Color	: black
Odor		: Characteristic odor
Odor Threshold		: No data available
pH		: No data available
Melting point/freezing point		: No data available
Boiling point/boiling range		: No data available
Flash point		: 95 °C / 203 °F (Acceptance by the lowest flash point)
Evaporation rate		: No data available
Flammability (solid, gas)		: No data available
Flammability Limits in Air		
Upper flammability limits		: No data available
Lower flammability limit		: No data available
Vapor Pressure		: No data available
Vapor density		: No data available
Specific gravity		: 1.0-1.3
Solubility(ies)		: Immiscible in water
Partition coefficient		: No data available
Autoignition temperature		: No data available
Decomposition temperature		: No data available
Kinematic viscosity		: No data available
Dynamic viscosity		: 7-12 mPa·s(25 deg.C)

[Other Information]

Molecular weight	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Softening point	: No data available
VOC Content (%)	: No data available
Density	: No data available
Bulk density	: No data available

10. Stability and Reactivity

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

11. Toxicological Information

[Information on likely routes of exposure]

Inhalation	: No data available.
Eye contact	: No data available.
Skin Contact	: No data available.
Ingestion	: No data available.

[Information on toxicological effects]

Acute toxicity : No data available.

Component Information : Caution - This preparation contains a substance not yet fully tested LD/LC50 values that relevant for classification.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
CARBON BLACK 1333-86-4	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-

[Symptoms]

Symptoms : No data available.

[Delayed and immediate effects as well as chronic effects from short and long-term exposure]

Skin corrosion/irritation : No data available.

Serious eye damage/eye irritation : No data available.

Sensitization : No data available.

Germ cell mutagenicity : No data available.

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

Chemical Name	ACGIH	IARC	NTP	OSHA
CARBON BLACK 1333-86-4	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

Reproductive toxicity : No data available.

STOT - single exposure : No data available.

STOT - repeated exposure : No data available.

Chronic toxicity : Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.

Aspiration hazard : No data available.

[Numerical measures of toxicity - Product Information]

Unknown Acute Toxicity : 98.4% of the mixture consists of ingredient(s) of unknown toxicity.

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.

Ecotoxicity : The table below indicates component(s) of known hazards to the aquatic environment.

96.7% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
CARBON BLACK 1333-86-4				EC50(24h): > 5600 mg/L (Daphnia magna)

Persistence and degradability : No data available.
Bioaccumulation : No data available.
Mobility : No data available.
Other adverse effects : No data available.

13. Disposal Considerations

[Waste treatment methods]

Disposal Methods : Comply with all USA, national and local regulations.
Do not dump this product into sewers, on the ground or into any body of water.

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

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

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Copper compounds	Toxic

14. Transport Information

Check a thing without a leak in a container.
Perform prevention of collapse of cargo surely.

[DOT]

UN/ID no : Not regulated.
Proper shipping name : Not regulated.
Hazard Class : Not regulated.
Packing Group : Not regulated.
Special Provisions : None.
Marine pollutant : Not Applicable.

[TDG]

UN/ID no	: Not regulated.
Proper shipping name	: Not regulated.
Hazard Class	: Not regulated.
Packing Group	: Not regulated.
Special Provisions	: None.
Marine pollutant	: Not regulated.

[MEX]

UN/ID no	: Not regulated.
Proper shipping name	: Not regulated.
Hazard Class	: Not regulated.
Packing Group	: Not regulated.
Special Provisions	: None.

[IATA]

UN/ID no	: Not regulated.
Proper shipping name	: Not regulated.
Hazard Class	: Not regulated.
Packing Group	: Not regulated.
Special Provisions	: None.

[IMDG]

UN/ID no	: Not regulated.
Proper shipping name	: Not regulated.
Hazard Class	: Not regulated.
Packing Group	: Not regulated.
Special Provisions	: None.
Marine pollutant	: Not regulated.
Environmental hazard	: Not Applicable.

15. Regulatory Information

[International Inventories]

TSCA-US-Toxic Substances Control Act	: Complies
TSCA 5a-US-Toxic Substances Control Act Section 5a	: This product contains components registered as TSCA 5(a)

DSL-Canada-Domestic Substances List : Not listed

[US Federal Regulations]

[SARA313]

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No.	weight-%	SARA 313 - Threshold Values %
Glycol ethers	CBI	<30	1.0

[SARA 311/312 Hazard Categories]

Acute health hazard : Yes
Chronic Health Hazard : Yes
Fire hazard : No
Sudden release of pressure hazard : No
Reactive Hazard : No

[CWA (Clean Water Act)]

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Copper compounds		×		

[CERCLA]

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental 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

[US State Regulations]

California Proposition 65 : **WARNING**

This product can expose you to chemicals including Benz[a]anthracene, Benzo[a]pyrene, Benzo[j]fluoranthene Benzo[k]fluoranthene, Carbon black, Dibenz[a,h]anthracene Naphthalene, Toluene, which are known to the State of California to cause cancer/ birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

EPA Pesticide Registration Number : EPA Pesticide Registration Number Not Applicable

[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

16. Other Information

References	1) LOLI Database (ChemADVISOR,Inc.) 2) Japan National Institute of Technology and Evaluation (NITE) 3) EU CLP(1272/2008)Annex VI Table 3.1
Other Information	This formulation contains a maximum of 3% of a SNUR chemical which is prohibited from release to water. The product or its wastes should either be pretreated before discharge to sewerage systems according to federal regulations or disposed of by incineration or other state or federal approved methods.

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