

Safety Data Sheets

1. Identification

| | |
|------------------------------------|---|
| Product Name | : HS ink Black |
| Order No. | : SPC-0473K-5, SPC-0589K-5 |
| General Use | : Ink for ink jet printer |
| Product Description | : Solvent pigment ink |
| 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 Information | |
| Company Name | : MIMAKI AUSTRALIA PTY LTD. |
| Address | : Unit 14, 38-46 South Street, Rydalmere, NSW 2116, Australia |
| Telephone No. | : + 61-2-8036-4500 |
| Emergency Telephone No. | : +61 2 8014 4558 (within Australia only) 18000 74234 (within Australia only) +65 3158 1074 |

2. Hazards Identification

[GHS Classification]

Physical Hazards

Flammable Liquids : Category 4

Health Hazards

Acute Toxicity – Oral : Not classified

Acute Toxicity – Dermal : Not classified

Skin Corrosion / Irritation : Category 2

Eye Damage / Irritation : Category 1

Specific Target Organ Toxicity : Category 3 (Narcotic effects)
(Single Exposure)

Environmental Hazards

Hazardous to the Aquatic : Category 2

Environment - Acute Hazard

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

- H227 Combustible liquid
- H315 Cause skin irritation
- H318 Cause serious eye damage
- H336 May cause drowsiness or dizziness
- H401 Toxic to aquatic life

Precautionary Statements

[Prevention]

- P210 Keep away from heat/sparks/open flames/hot surfaces.-No smoking.
- P261 Avoid breathing gas/mist.
- P264 Wash hands thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- 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.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment (see 4-Response on our website/SDS URL: www.mimaki.co.jp/sds).
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P362+P364 Take off contaminated clothing and wash before reuse.
- P370+P378 In case of fire: Use appropriate media for extinction.

[Storage]

- P403+P233+P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.

P405 Store locked up.

[Disposal]

- P501 Dispose of contents and container in accordance with local, regional, national and international regulation.

3. Composition / Information on Ingredients

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| No | Chemical Name | Wt% | CAS No. |
|----|--|-------|-------------|
| 1 | Carbon black | 0.1-5 | Registered |
| 2 | Copper compound | 0.1-5 | Registered |
| 3 | Vinyl chloride / Vinyl acetate copolymer resin | 0.1-5 | Registered |
| 4 | Polyester resin | 0.1-5 | Registered |
| 5 | Dipropylene glycol methyl ether acetate | 10-20 | 88917-22-0 |
| 6 | Dipropylene glycol dimethyl ether | 30-60 | 111109-77-4 |
| 7 | Gamma-Butyrolactone | 10-40 | 96-48-0 |
| 8 | Additives | 0.1-5 | Registered |

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. |
| 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. |
| Skin Contact | : Wash skin thoroughly with plenty of water. If on clothing, remove immediately contaminated clothing. |
| Ingestion | : Do not induce vomiting. If swallowed, keep calm and consult a doctor immediately. Keep from swallowing vomit. |
| Protection To First-Aiders | : Wear tools for appropriate protection. Ventilate. See section 7 and 8. |
| Indication of Immediate Medical Attention and Special Treatment Needed, If Needed | : Treat symptomatically and supportively. |

5. Fire Fighting Measures

| | |
|--------------------------|---|
| Flammable Properties | : Avoid breathing combustion products. Flash point : 74°C Ignition point : Not available Explosion point : 0.85~15.60 vol% |
| Extinguishing Media | : Foam, carbon dioxide, dry chemical, water spray |
| Unsuitable Extinguishing | : Do not scatter spilled material with high-pressure water streams |

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Media

Fire Fighting Measures : Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Avoid inhalation of material or combustion by-products. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire.

Special Protective Equipment and Precautions for Firefighters : Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures : Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

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Methods and Materials for Containment and Cleaning Up : Eliminate all ignition sources if safe to do so. Stop leak if possible without personal risk. Reduce vapors with water spray.
Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.
Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.

7. Handling and Storage

Handling : Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing gas/mist. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Storage : Store and handle in accordance with all current regulations and standards. Keep container tightly closed. Keep cool. Grounding and bonding required. Store locked up. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure Limit Values

| No | Chemical Name | | TWA |
|----|---------------|-------|---|
| 1 | Carbon black | ACGIH | 3 mg/m ³ TWA (inhalable fraction) |
| | | OSHA | 3.5 mg/m ³ TWA |
| | | NIOSH | 3.5 mg/m ³ TWA; 0.1 mg/m ³ TWA (Carbon black in presence of Polycyclic aromatic hydrocarbons, as PAH) |

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Exposure Controls

Occupational Exposure Controls

Engineering Controls : Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protection

Respiratory Protection : Wear protective masks for hazardous materials.



Hand Protection : Wear gloves resistant to organic solvents and chemicals.



Eye Protection : Wear coverall, chemical goggles and face shield when handling.



Skin Protection : To prevent any contact, wear impervious clothing such as gloves, apron, boots, or whole body suits made from neoprene, as appropriate.



Environmental Exposure Controls

: Not available

9. Physical and Chemical Properties

| | | |
|-------------------------------|------------------|-----------------|
| Appearance | - Physical State | : liquid (25°C) |
| | - Color | : Black |
| Odor | | : Solvent odor |
| pH | | : Not available |
| Boiling Point / Boiling Range | | : 175~209 °C |
| Melting Point / Melting Range | | : < -30°C |

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| | |
|--|----------------------|
| Flash Point | : 74°C |
| Flammability (Solid, Gas) | : Not Applicable |
| Upper / Lower Flammability or Explosive Limits | : 0.85~15.60 vol% |
| Vapor Pressure | : 257Pa (20°C) |
| Vapor Density | : 6.6 |
| Relative Density | : 1.00 (25°C) |
| Solubility (Ies) | : Very small amount |
| Partition Coefficient (n-octanol / Water) | : Not available |
| Viscosity | : 4.0 mPa · s (25°C) |

10. Stability and Reactivity

| | |
|--|---|
| Conditions to Avoid | : Excessive heat and cold, sparks, ignition sources, direct sunlight and high humidity. Gamma-Butyrolactone is hydrolyzed by thermal decomposition. |
| Stability | : Stable |
| Materials to Avoid | : Oxidant, reducing agent, strong acid, strong base, inert gas, deoxidant |
| Hazardous Reactions / Decomposition Products | : Combustion: toxic gases, oxides of carbon, oxides of nitrogen |
| Other | : Plastic and rubbers might be melted. |

11. Toxicological Information

Acute Toxicity :

| | Oral (rat) | Dermal (rabbit) |
|---------|---------------------------------------|---------------------------------------|
| Product | LD50 >2,000mg/kg Not classified | LD50 >2,000mg/kg Not classified |

| | |
|---------------|-----------------|
| Eye Contact | : eye damage |
| Skin Contact | : irritation |
| Sensitization | : Not Available |
| Mutagenicity | : Not Available |

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Carcinogenicity : Component Carcinogenicity

Carbon black (1333-86-4) (Not possible to classify as a printing ink)

| | |
|--------|---|
| ACGIH: | A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans |
| IARC: | Monograph 93 [2010]; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans)) |
| DFG: | Category 3B (could be carcinogenic for man, inhalable fraction) |
| OSHA: | Present |

Specific Target Organ : drowsiness or dizziness

Toxicity - Single

Exposure

Specific Target Organ : Not Available

Toxicity - Repeated

Exposure

Reproductive and : Not Available

Developmental Toxicity

Others : Not Available

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 : Hazardous to the Aquatic Environment - Acute Hazard

Calculated value : L(E)C50 >5.0mg/L Category 2

Persistence and : Not available

Degradability

Bioaccumulative : Not available

Potential

Other Adverse Effects : Not available

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13. Disposal Considerations

Have waste inks, containers and other materials disposed by licensed industrial waste disposer.

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.

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.

UN Number

: Not Applicable

15. Regulatory Information

Australia Regulations

No main regulation

16. Other Information

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

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