

Safety Data Sheets

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

SS21 ink Light Black

Product Description

SPC-0501LK-2 / SPC-0588LK-2 / SS21-LK-60-2

Ink Ver.

2

Product Use

INK JET ink

Restrictions on Use

None known

Manufacturer Information

Mimaki Engineering Co., Ltd
2182-3 Shigeno-otsu, Tomi-shi, Nagano 389-0512 Japan
Phone: +81-268-64-2413

Importer / Distributor Information

MIMAKI SINGAPORE PTE. LTD.
31 Kaki Bukit Road 3 Singapore 417818 TechLink #02-03
Telephone number: +65-6508-2789

Emergency telephone number

+65 3165 2217 (within Singapore only)
+65 3158 1074

Section 2 - HAZARDS IDENTIFICATION

Classification of the substance or mixture**Classification**

Flammable Liquid : Category 4
Serious Eye Damage : Category 1
Carcinogenicity : Category 2
Reproductive Toxicity : Category 1B
Specific target organ toxicity - : Category 2
single exposure
Specific target organ toxicity - : Category 2
repeated exposure

GHS Label Elements**Symbol(s)****Signal Word**

Danger

Hazard Statement(s)

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H318 Causes serious eye damage.
 H351 Suspected of causing cancer.
 H360 May damage fertility or the unborn child.
 H371 May cause damage to organs.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H227 Combustible liquid.

Precautionary Statement(s)

Prevention

P201 Obtain special instructions before use.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P270 Do not eat, drink or smoke when using this product.

Response

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/doctor/physician/first aider.
 P370+P378 In case of fire: Use water spray/fog to extinguish.
 P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor/physician/first aider.

Storage

P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local regulations.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| CAS No | Name | %[weight] |
|--------------|------------------------|-----------|
| Trade secret | Glycol ether solvents | 75-85 |
| Trade secret | Lactone solvent series | 10-20 |
| Trade secret | Vinyl resin | 1-5 |
| Trade secret | Pigment | 0.1-1 |
| Trade secret | Pigment B | 0.1-1 |
| Trade secret | Corrosion inhibitor | 0.1-1 |

Section 4 - FIRST AID MEASURES

Description of first aid measures

Eye Contact : If this product comes in contact with the eyes:
 Immediately hold eyelids apart and flush the eye continuously with running water.
 Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
 Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
 Transport to hospital or doctor without delay.
 Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact : If skin or hair contact occurs:

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| Inhalation | : Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation. : If fumes, aerosols or combustion products are inhaled remove from contaminated area. |
| Ingestion | : Other measures are usually unnecessary. : Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. |
| Indication of any immediate medical attention and special treatment needed | : Treat symptomatically. |

Section 5 - FIRE FIGHTING MEASURES

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| Extinguishing media | : Foam. Dry chemical powder. BCF (where regulations permit). Carbon dioxide. Water spray or fog - Large fires only. |
| Fire Incompatibility | : None known. |
| Fire Fighting | : Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. |
| Fire/Explosion Hazard | : Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit irritating/ toxic fumes. May emit acrid smoke. Mists containing combustible materials may be explosive. May emit poisonous fumes. May emit corrosive fumes. |

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8.

Environmental precautions

See section 12.

Methods and material for containment and cleaning up

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|--------------|---|
| Minor Spills | : Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. |
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Major Spills : Place in a suitable, labelled container for waste disposal.
 : Moderate hazard.
 Clear area of personnel and move upwind.
 Alert Fire Brigade and tell them location and nature of hazard.
 Wear breathing apparatus plus protective gloves.
 Prevent, by any means available, spillage from entering drains or water course.
 No smoking, naked lights or ignition sources.
 Increase ventilation.
 Stop leak if safe to do so.
 Contain spill with sand, earth or vermiculite.
 Collect recoverable product into labelled containers for recycling.
 Absorb remaining product with sand, earth or vermiculite.
 Collect solid residues and seal in labelled drums for disposal.
 Wash area and prevent runoff into drains.
 If contamination of drains or waterways occurs, advise emergency services.
 Personal Protective Equipment advice is contained in Section 8 of the SDS.

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| Section 7 - HANDLING AND STORAGE |
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Precautions for safe handling : Avoid all personal contact, including inhalation.
 Wear protective clothing when risk of exposure occurs.
 Use in a well-ventilated area.
 Avoid smoking, naked lights or ignition sources.
 Avoid contact with incompatible materials.
 When handling, DO NOT eat, drink or smoke.
 Keep containers securely sealed when not in use.
 Avoid physical damage to containers.
 Always wash hands with soap and water after handling.
 Work clothes should be laundered separately.

Conditions for safe storage : Store in original containers.
 Keep containers securely sealed.
 No smoking, naked lights or ignition sources.
 Store in a cool, dry, well-ventilated area.
 Store away from incompatible materials and foodstuff containers.
 Protect containers against physical damage and check regularly for leaks.
 Observe manufacturer's storage and handling recommendations contained within this SDS.

Storage incompatibility : None known

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| Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION |
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Control parameters
OCCUPATIONAL EXPOSURE LIMITS (OEL)
INGREDIENT DATA

| Ingredient | Material name | TWA | STEL | Peak | Notes |
|------------|---------------|-----------|---------------|---------------|---------------|
| Pigment | Carbon black | 3.5 mg/m3 | Not Available | Not Available | Not Available |

Source: Singapore Permissible Exposure Limits of Toxic Substances

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EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|------------------------|---------------|-----------------------|-------------------------|-------------------------|
| Pigment | Carbon black | 9 mg/m ³ | 99 mg/m ³ | 590 mg/m ³ |
| Pigment B | Trade secret | 12 mg/m ³ | 130 mg/m ³ | 790 mg/m ³ |
| Vinyl resin | Trade secret | 120 mg/m ³ | 1,300 mg/m ³ | 7,900 mg/m ³ |
| Lactone solvent series | Trade secret | 3.6 mg/m ³ | 39 mg/m ³ | 310 mg/m ³ |

| Ingredient | Original IDLH | Revised IDLH |
|------------------------|-----------------------------------|-------------------------|
| Pigment | N.E. mg/m ³ / N.E. ppm | 1,750 mg/m ³ |
| Pigment B | Not Available | Not Available |
| Vinyl resin | Not Available | Not Available |
| Glycol ether solvents | Not Available | Not Available |
| Lactone solvent series | Not Available | Not Available |
| Corrosion inhibitor | Not Available | Not Available |

Exposure controls

Appropriate Engineering Controls : General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

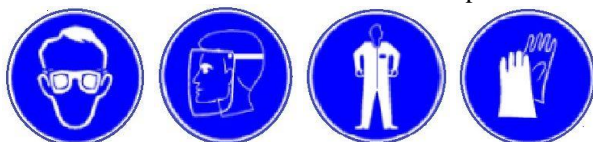
Personal protection

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

Hand Protection : Wear chemical protective gloves, e.g. PVC.

Eye Protection : Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.

Skin Protection : Wear safety footwear or safety gumboots, e.g. Rubber. Overalls. P.V.C. apron.



Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance: Black liquid

| | | | |
|--|---------------|---|---------------|
| Physical state | Liquid | Relative density (Water = 1) | 0.974 |
| Odour | Slight | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | 169 |
| pH (as supplied) | Not Available | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | 176-204 | Molecular weight (g/mol) | Not Available |
| Flash point (°C) | 64.7 | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | Combustible | Oxidising properties | Not Available |

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|---------------------------|---------------|----------------------------------|---------------|
| Upper Explosive Limit (%) | 33 | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | 2 | Volatile Component (% vol) | Not Available |
| Vapour pressure (kPa) | 2.67 | Gas group | Not Available |
| Solubility in water (g/L) | Immiscible | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | Not Available |

Section 10 - STABILITY AND REACTIVITY

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| Reactivity | : Stable under normal conditions of use. |
| Chemical Stability | : Unstable in the presence of incompatible materials. Product is considered stable. |
| Possibility of Hazardous Reactions | : Hazardous polymerisation will not occur. |
| Conditions to Avoid | : See section 7. |
| Incompatible Materials | : See section 7. |
| Hazardous decomposition products | : See section 5. |

Section 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects

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| Inhaled | : The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. |
| Ingestion | : The material has NOT been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is because of the lack of corroborating animal or human evidence. |
| Skin Contact | : The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives . Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. |
| Eye | : If applied to the eyes, this material causes severe eye damage. |
| Chronic | : Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the material. Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material. |

| | TOXICITY | IRRITATION |
|-----------------------|---------------|---------------|
| As a Product | Not Available | Not Available |
| Pigment | Not Available | Not Available |
| Pigment B | Not Available | Not Available |
| Vinyl resin | Not Available | Not Available |
| Glycol ether solvents | Not Available | Not Available |

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| | | |
|------------------------|---------------|---------------|
| Lactone solvent series | Not Available | Not Available |
| Corrosion inhibitor | Not Available | Not Available |

| | |
|-----------------------------------|--|
| Acute Toxicity | : Data Not Available to make classification. |
| Skin Irritation/Corrosion | : Data Not Available to make classification. |
| Serious Eye Damage/Irritation | : Data available to make classification. |
| Respiratory or Skin sensitisation | : Data Not Available to make classification. |
| Mutagenicity | : Data Not Available to make classification. |
| Carcinogenicity | : Data available to make classification. |
| Reproductivity | : Data available to make classification. |
| STOT – Single Exposure | : Data available to make classification. |
| STOT – Repeated Exposure | : Data available to make classification. |
| Aspiration Hazard | : Data Not Available to make classification. |

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

| Ingredient | Endpoint | Test Duration (hr) | Species | Value | Source |
|------------------------|----------|--------------------|-------------------------------|--------------|--------|
| Pigment | LC50 | 96 | Fish | =1000mg/L | 1 |
| | EC50 | 24 | Crustacea | >5600mg/L | 1 |
| | EC50 | 96 | Fish | =1000mg/L | 1 |
| Glycol ether solvents | LC50 | 96 | Fish | 713.772mg/L | 3 |
| | EC50 | 96 | Algae or other aquatic plants | 4246.290mg/L | 3 |
| | EC50 | 384 | Crustacea | 163.553mg/L | 3 |
| Lactone solvent series | LC50 | 96 | Fish | 220mg/L | 1 |
| | EC50 | 48 | Crustacea | >500mg/L | 1 |
| | EC50 | 96 | Algae or other aquatic plants | 16.400mg/L | 3 |
| | EC20 | 72 | Algae or other aquatic plants | =14mg/L | 1 |
| | NOEC | 24 | Fish | =5mg/L | 1 |
| Corrosion inhibitor | LC50 | 96 | Fish | 1514.080mg/L | 3 |
| | EC50 | 48 | Crustacea | 374mg/L | 2 |
| | EC50 | 96 | Algae or other aquatic plants | 61.454mg/L | 3 |
| | EC50 | 504 | Crustacea | 59.8mg/L | 2 |
| | NOEC | 504 | Crustacea | 3.99mg/L | 2 |

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances – Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated)

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|------------------------|-------------------------|------------------|
| Glycol ether solvents | LOW | LOW |
| Lactone solvent series | LOW | LOW |
| Corrosion inhibitor | LOW | LOW |

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Bioaccumulative potential

| Ingredient | Bioaccumulation |
|------------------------|------------------------|
| Glycol ether solvents | LOW (LogKOW = 0.0093) |
| Lactone solvent series | LOW (BCF = 1.8) |
| Corrosion inhibitor | LOW (LogKOW = -0.6047) |

Mobility in soil

| Ingredient | Mobility |
|------------------------|-------------------|
| Glycol ether solvents | LOW (KOC = 10) |
| Lactone solvent series | LOW (KOC = 7.134) |
| Corrosion inhibitor | HIGH (KOC = 1) |

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods : Dispose in accordance with all applicable regulations.
 Disposal of Contaminated Packaging : Empty containers may contain product residue. Dispose in accordance with all applicable regulations.

Section 14 - TRANSPORT INFORMATION

Marine Pollutant : NO.
 Land transport (UN) : NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS.
 Air transport (ICAO-IATA / DGR) : NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS.
 Sea transport (IMDG-Code / GGVSee) : NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS.
 Transport in bulk according to Annex II of MARPOL and the IBC code : Not Applicable.

Section 15 - REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|------------------------|--|
| PIGMENT | Singapore Permissible Exposure Limits of Toxic Substances. |
| PIGMENT (GREEN) | Not Applicable. |
| VINYL RESIN | Not Applicable. |
| GLYCOL ETHER SOLVENTS | Not Applicable. |
| LACTONE SOLVENT SERIES | Not Applicable. |
| CORROSION INHIBITOR | Not Applicable. |

Inventory

| National Inventory | Status |
|-------------------------------|--------|
| Australia - AICS | Y |
| Canada - DSL | N |
| Canada - NDSL | Y |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | Y |



Product Name: SS21 ink Light Black
SDS No. 037-S085997
First issue: 2022/04/01
Revised:

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| | |
|---------------------|---|
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | N |
| USA - TSCA | Y |

Legend: Y = All ingredients are on the inventory.

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets).

Section 16 - OTHER INFORMATION

Other Information

Disclaimer:

The information set forth in this Safety Data Sheet does not purport to be all-inclusive and should be used only as a guide. While the information and recommendations set forth herein are believed to be accurate, the company makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.