SAFETY DATA SHEET

Version: v1 Revision Date: 2023-11-23 Print Date: 2023-12-02

SECTION 1:Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

| Product name | : SunTronic® silver nanoparticle ink for inkjet printing |
|----------------|--|
| Product Number | : S478480 |
| Brand | : aladdin |
| CAS-No. | : no data available |

1.2 Relevant identified uses of the substance or mixture and uses advised against

: Laboratory chemicals, Manufacture of substances

Identified uses

1.3 Details of the supplier of the safety data sheet

| : Shanghai Aladdin Biochemical Tech Co.,Ltd |
|---|
| : 36 Xinjinqiao Road, Shanghai |
| : 400-620-6333 |
| : no data available |
| |

1.4 Emergency telephone number

| Emergency Phone | : 0532-83889090 |
|-----------------|-----------------|
|-----------------|-----------------|

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2),H225

Acute toxicity,Oral (Category 4),H302

Eye irritation (Category 2),H319

Specific target organ toxicity - repeated exposure (Category 2),Kidney,H373

Short-term (acute) aquatic hazard (Category 1),H400

Long-term (chronic) aquatic hazard (Category 1),H410

2.2 GHS Label elements, including precautionary statements

| Pictogram | no data available |
|-------------|-------------------|
| Signal word | Danger |

| Hazard statement(s) | |
|----------------------------|--|
| H225 | Highly Flammable liquid and vapor |
| H302 | Harmful if swallowed |
| H319 | Causes serious eye irritation |
| H373 | Causes damage to organs through prolonged or repeated exposure |
| H410 | Very toxic to aquatic life with long lasting effects |
| Precautionary statement(s) | |
| P210 | Keep away from heat, hot surface, sparks, open flames and other ignition |
| | sources No smoking. |
| P233 | Keep container tightly closed. |
| P260 | Do not breathe dust/fume/gas/mist/vapors/spray. |
| P273 | Avoid release to the environment. |
| P391 | Collect spillage. |
| P370+P378 | In case of fire: Use to extinguish. |

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.2 Mixtures

| Synonyms | : no data available |
|------------------|---------------------|
| Formula | : no data available |
| Molecular weight | : no data available |

| Component |
|-----------|
|-----------|

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Classification
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Concentration

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section

11

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4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Dry powder Dry sand Unsuitable extinguishing media no data available

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Silver/silver oxides Mixture with combustible ingredients.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No



smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place. Recommended storage temperature 2 - 8 °C

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it. Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| a) Appearance | no data available |
|---------------|-------------------|
| b) Odour | no data available |

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| c) Odour Threshold | no data available |
|---|---------------------|
| d) pH | no data available |
| e) Melting point/freezing point | no data available |
| f) Initial boiling point and boiling range | no data available |
| g) Flash point | 22 °C |
| h) Evaporation rate | no data available |
| i) Flammability (solid, gas) | no data available |
| j) Upper/lower flammability or | |
| explosive limits | no data available |
| k) Vapour pressure | no data available |
| l) Vapour density | no data available |
| m) Relative density | no data available |
| n) Water solubility | no data available |
| o) Partition coefficient: n-octanol/wate | r no data available |
| p) Auto-ignition temperature | no data available |
| q) Decomposition temperature | no data available |
| r) Viscosity | no data available |
| s) Explosive properties N | no data available |
| t) Oxidizing properties N | no data available |

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Carbon oxides, Silver/silver oxides

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity no data available Skin corrosion/irritation no data available Serious eye damage/eye irritation no data available Respiratory or skin sensitisation no data available Germ cell mutagenicity no data available Carcinogenicity no data available Reproductive toxicity no data available Specific target organ toxicity - single exposure no data available Specific target organ toxicity - repeated exposure no data available Aspiration hazard no data available Additional Information no data available

SECTION 12: Ecological information

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

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no data available

SECTION 13:

13.1 Disposal considerations

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

| DOT (US) | | |
|--|----------------------------------|-----------------------------------|
| UN number: 1993 | Packing group: II | Class: 3 |
| Proper shipping name: FLAMMABLE | Reportable Quantity(RQ): no data | Poison Inhalation Hazard: no data |
| LIQUID, N.O.S. (ethanol, 2-Propanol, | available | available |
| colloidal silver) | | |
| Environmental Hazards: yes | | |
| IMDG | | |
| UN number: 1993 | Packing group: II | EMS-No: no data available |
| Proper shipping name: FLAMMABLE LIQUID, N.O.S. (ethanol, 2-Propanol, colloidal silver) | | |
| ΙΑΤΑ | | |
| UN number: 1993 | Packing group: II | Class: 3 |
| Proper shipping name: FLAMMABLE LIQUID, N.O.S. (ethanol, 2-Propanol, colloidal silver) | | |

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

Further information

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