

SAFETY DATA SHEET

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

- a. Product Name : Acridine Orange/Propidium Iodide (AO/PI) Stain
- Product Number : F23001
- b. Relevant identified uses of the substance or mixture and uses advised against : **Identified uses**
Laboratory chemicals, Manufacture of substances
- c. Manufacturer & Supplier : Aligned Genetics, Inc
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Gunpo-si,
Gyeonggi-do,
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Telephone: +82-31-478-4185
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For research use only. Not intended for human or animal diagnostic or therapeutic use.

SECTION 2: Hazards identification

a. GHS classification

Classification according to Regulation (EC) No 1272/2008
Not hazardous

b. GHS-Labeling

Labeling according to Regulation (EC) No 1272/2008

Hazard pictograms
None

Signal word
Not hazardous

Hazard statements
Not hazardous

Precautionary statements
Not hazardous

c. Other hazard which do not result in classification

None

SECTION 3: Composition/ Information on ingredients

3b. Mixtures

Component:	Acridine Orange
Synonyms:	N,N,N',N'-Tetramethylacridine-3,6-diamine monohydrochloride, compound with zinc dichloride
Formula:	C ₁₇ H ₁₉ N ₃
CAS-No.:	10127-02-3
Weight%:	< 0.002%
Component:	Propidium Iodide
Synonyms:	3,8-diamino-5-[3-(diethylmethyllummonio)propyl]-6-phenylphenanthridinium diiodide
Formula:	C ₂₇ H ₃₄ I ₂ N ₄
CAS-No.:	25535-16-4
Weight%:	< 0.02%

SECTION 4: First aid measures

- a. **In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- b. **In case of skin contact**
Wash off with soap and plenty of water. Consult a physician.
- c. **If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- d. **If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
- e. **General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.

SECTION 5: Firefighting measures

- a. **Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- b. **Specific hazards arising from the chemical**
Carbon oxides, nitrogen oxides (NO_x), Hydrogen chloride gas.
- c. **Special protective actions for fire-fighters**
Wear self-contained breathing apparatus for firefighting if necessary.
- d. **Further information**
No data available.

SECTION 6: Accidental release measures

- a. **Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personal to safe areas. For personal protection see section 8.
- b. **Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

c. Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

d. Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

a. Precautions for safe handling

Avoid contact with skin and eyes and clothing.

b. Conditions for safe storage

Protect against light. Keep containers tightly closed in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 2 – 8°C

c. Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: Exposure controls/ personal protection

a. Control parameters

Components with workplace control parameters.

b. Appropriate engineering controls

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

c. Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substances at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose 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

Information on basic physical and chemical properties

a. Appearance	Form: liquid
b. Odor	No data available
c. Odor Threshold	No data available
d. pH	No data available
e. Melting point/freezing point	No data available
f. Initial boiling point and boiling range	100°C
g. Flash point	No data available
h. Evaporation rate	No data available
i. Flammability (solid, gas)	No data available
j. Lower explosion limit	No data available
k. Upper explosion limit	No data available
l. Vapour pressure	No data available
m. Vapour density	No data available
n. Specific Gravity/Relative density	No data available
o. Water Solubility	Soluble
p. Partition coefficient: n-octanol / water	No data available
q. Auto-ignition temperature	No data available
r. Decomposition temperature	No data available
s. Viscosity	No data available
t. Explosive properties	No data available
u. Oxidizing properties	No data available

Other safety information

No data available

SECTION 10: Stability and reactivity

- a. **Stability**
Stable under recommended storage conditions.
- b. **Reactivity**
No data available.
- c. **Possibility of hazardous reactions**
No data available.
- d. **Conditions to avoid**
No data available.
- e. **Incompatible materials**
Strong oxidizing agents
- f. **Hazardous decomposition products**
Other decomposition products – No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

a. Information on likely routes of exposure

Inhalation

May be harmful by inhalation.

Ingestion

May be harmful if swallowed.

Skin

May cause skin irritation in susceptible persons.

Eyes

May cause eye irritation with susceptible persons.

Infection

May be harmful if injected

Mutagenic effects

Substances which cause concern for man owing to possible mutagenic effects but for which the available information is not adequate for making a satisfactory assessment.

b. Delayed and immediate effects and also chronic effect from short and long term exposure

Acute toxicity

No data available.

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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

RTECS: Not available.

SECTION 12: Ecological information

a. Toxicity

No data available.

b. Persistence and degradability

No data available.

c. Bioaccumulative potential

No data available.

d. Mobility in soil

No data available.

e. Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

f. Other adverse effects

No data available.

SECTION 13: Disposal considerations

a. Disposal methods

Offer surplus and non-recyclable solutions to a licensed disposal company.

b. Contaminates packaging

Dispose of as unused product.

SECTION 14: Transport information

UN number	ADR/RID: -	IMDG: -	IATA: -
UN proper shipping name	ADR/RID: Not dangerous goods	IMDG: Not dangerous goods	IATA: Not dangerous goods
Transport hazard class(es)	ADR/RID: -	IMDG: -	IATA: -
Packaging group	ADR/RID: -	IMDG: -	IATA: -
Environmental hazards	ADR/RID: no	IMDG Marine pollutant: no	IATA: no
Special precautions for user	No data available		

SECTION 15: Regulatory information

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

a. Regulation under the Occupational Safety and Health Act

No data available.

b. Chemical safety assessment

For this product, a chemical safety assessment was not carried out.

SECTION 16: Other information

Further information

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The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and applies to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Aligned Genetics, Inc. and its Affiliates shall not be held liable for any damage resulting from handling or contact with the above product. See the reverse side of the invoice or packing slip for additional terms and conditions of sale.

End of Safety Data Sheet