

# SAFETY DATA SHEET

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Identification

Product Name                      Acridine Orange/Propidium Iodide (AO/PI) Stain  
Product Number                 F23001

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

Identified uses:                      Laboratory chemicals, Manufacture of substances

### Manufacturer

Logos Biosystems, Inc.  
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Dongan-gu, Anyang-si  
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South Korea  
Telephone: +82-31-478-4185  
Fax: +82-31-360-4277  
E-mail: sales@logosbio.com

### Supplier

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E-mail: sales@logosbio.com

**Emergency telephone number   +82 31 478 4185**

**For research use only. Not intended for human or animal diagnostic or therapeutic use.**

## 2. HAZARDS IDENTIFICATION

### **[GHS classification]**

#### **Classification of the substance or mixture**

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

### **Label elements**

Labelling according Regulation (EC) No 1272/2008

Hazard pictograms                 None

Signal word                         Not hazardous

Hazard statements  
Not hazardous  
Precautionary statements  
Not hazardous

**Other hazards**

None

**3. COMPOSITION / INFORMATION ON INGREDIENTS****Mixtures**

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

**4. FIRST AID MEASURES****Description of first aid measures**

General advice	Consult a physician. Show this 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 thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**5. FIRE-FIGHTING MEASURES****Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substances or mixture**Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Hydrogen iodide, Hydrogen chloride gas.**Advice of fire-fighters****Protective equipment**

Wear self-contained breathing apparatus for firefighting if necessary.

**Further information**

No data available

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personal to safe areas. For personal protection see section 8.

**Environmental precautions**

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

**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.

**Reference to other sections**

For disposal see section 13.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

Avoid contact with skin and eyes and clothing.

**Conditions for safe storage, including any incompatibilities**

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

**Specific end use(s)**

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

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Control parameters**

**Components with workplace control parameters**

**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**

<b>Eye/face protection</b>	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).
<b>Skin protection</b>	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.
<b>Body protection</b>	Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substances at the specific workplace.

<b>Respiratory protection</b>	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).
<b>Control of Environmental exposure</b>	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Form: liquid
<b>Odour</b>	No data available
<b>Odour Threshold</b>	No data available
<b>pH</b>	No data available
<b>Melting point/freezing point</b>	No data available
<b>Initial boiling point and boiling range</b>	100°C
<b>Flash point</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Upper/lower flammability or explosive limits</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Vapour density</b>	No data available
<b>Specific Gravity/Relative density</b>	No data available
<b>Water Solubility</b>	Soluble
<b>Partition coefficient: n-octanol / water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive properties</b>	No data available
<b>Oxidizing properties</b>	No data available

### Other safety information

No data available

## 10. STABILITY AND REACTIVITY

### Stability

**Stability** Stable under recommended storage conditions.  
**Reactivity** No data available

**Possibility of hazardous reactions**

No data available

**Conditions to avoid**

No data available

**Incompatible materials**

Strong oxidizing agents

**Hazardous decomposition products**

Other decomposition products – No data available  
In the event of fire: see section 5

**11. TOXICOLOGICAL INFORMATION**

**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**

<b>IARC</b>	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
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**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

**Potential health effects**

<b>Inhalation</b>	May be harmful by inhalation
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<b>Ingestion</b>	May be harmful if swallowed
<b>Skin</b>	May cause skin irritation in susceptible persons
<b>Eyes</b>	May cause eye irritation with susceptible persons
<b>Infection</b>	May be harmful if injected
<b>Mutagenic effects</b>	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

**Additional Information**

RTECS: Not available

**12. ECOLOGICAL INFORMATION**

**Toxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Results of PBT and vPvB assessment**

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

**Other adverse effects**

No data available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Product**

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

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION**

<b>UN number</b>	ADR/RID: -	IMDG: -	IATA: -
<b>UN proper shipping name</b>	ADR/RID: Not dangerous goods	IMDG: Not dangerous goods	IATA: Not dangerous goods

<b>Transport hazard class(es)</b>	ADR/RID: -	IMDG: -	IATA: -
<b>Packaging group</b>	ADR/RID: -	IMDG: -	IATA: -
<b>Environmental hazards</b>	ADR/RID: no	IMDG Marine pollutant: no	IATA: no
<b>Special precautions for user</b>	No data available		

## 15. REGULATORY INFORMATION

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

### **Safety, health and environmental regulations/legislation specific for the substance or mixture**

No data available

### **Chemical safety assessment**

For this product a chemical safety assessment was not carried out

## 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 is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Logos Biosystems, Inc. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See the reverse side of invoice or packing slip for additional terms and conditions of sale.

End of Safety Data Sheet