DENOVIX, INC.

Safety Data Sheet DeNovix Acridine Orange Dye

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

1.1 Product identifier

Product name

DeNovix Acridine Orange Dye

1.2 Relevant identified uses of the substance or mixture and uses advised against For research use only

1.3 Details of the supplier of the safety data sheet

Name Address	DeNovix, Inc. 3411 Silverside Road Hanby Building 101 Wilmington DE 19810 USA
Telephone	302-442-6911

1.4 Emergency telephone number

302-442-6911

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

2.3 Other hazards

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

CAS no.

Hazardous components

1. Water				
Concentration	99.9 % (weight)			
EC no.	231-791-2			
CAS no.	7732-18-5			
2. Acridine Orange hydrochloride hydrate				
Concentration	0.1 % (weight)			
EC no.	200-614-0			

65-61-2

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes	Consult a physician. Show this safety data sheet to the doctor in attendance.
Following inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Following skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Following eye contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention/advice.
Following ingestion	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

4.3 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. 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. Light sensitive.

SECTION 8: Exposure controls/personal protection

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.

Individual protection measures, such as personal protective equipment

Eye and face protection

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.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Colorless Liquid
Odour	No information available
Odour threshold	No information available
рН	3.0
Melting point/freezing point	0.0°C
Boiling point or initial boiling point and boiling range	100°C
Flash point	No information available
Evaporation rate	No information available
Flammability	No information available

Safety Data Sheet DeNovix Acridine Orange Dye

Lower and upper explosive limit Vapour pressure Relative vapour density Density and/or relative density Solubility Partition coefficient n-octanol/water (log value) Auto-ignition temperature Decomposition temperature Kinematic viscosity

Additional properties

Physical state Colour No information available No information available No information available 1.0 (Water) No information available No information available No information available No information available No information available

Liquid Colorless

Particle characteristics Not Applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes No information available

9.2.2 Other safety characteristics

No information available

SECTION 10: Stability and reactivity

10.1 Reactivity

None under normal use conditions.

- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** None under normal use conditions.
- **10.4 Conditions to avoid** None under normal use conditions.
- **10.5** Incompatible materials Strong oxidizing agents
- **10.6 Hazardous decomposition products** Other decomposition products - No data available In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, classification data are not met

Skin corrosion/irritation

Based on available data, classification data are not met

Safety Data Sheet DeNovix Acridine Orange Dye

Serious eye damage/irritation

Based on available data, classification data are not met

Respiratory or skin sensitization

Based on available data, classification data are not met

Germ cell mutagenicity

Based on available data, classification data are not met

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.

Reproductive toxicity

Based on available data, classification data are not met

Specific target organ toxicity (STOT) - single exposure

Based on available data, classification data are not met

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, classification data are not met

Aspiration hazard No data available

11.2 Information on other hazards

SECTION 12: Ecological information

12.1 Toxicity

FISH Mortality LC50 - Oncorhynchus mykiss (rainbow trout) - 520 mg/l - 96 h Method: OECD Test Guideline 203

DAPHINA Immobilization EC50 - Daphnia magna (Water flea) - 77 mg/l - 48 h Method: DIN 38412

TOXICITY TO ALGAE Growth inhibition IC50 - Desmodesmus subspicatus (green algae) - 90 mg/l - 72 h Method: OECD Test Guideline 201

TOXICITY TO BACTERIA Growth inhibition IC50 - Pseudomonas putida - 120 mg/l - 72

12.2 Persistence and degradability Readily Biodegradable

- **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 Endocrine disrupting properties** No data available

Safety Data Sheet DeNovix Acridine Orange Dye

12.7 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product disposal

Products covered by this SDS, in their original form, when disposed as waste, are considered non hazardous waste. Disposal should be in accordance with local, state and federal regulations. Dispose of empty container in the trash or recycle where facilities exist.

Packaging disposal

Dispose of as unused product.

SECTION 14: Transport information

14.1	UN Number	None
14.2	UN Proper Shipping Name	None
14.3	Transport hazard class(es)	None
14.4	Packing group	None
14.5	Environmental hazards	None
14.6	Special precautions for user	None
14.7	Maritime transport in bulk according to IMO instruments	None

SECTION 15: Regulatory information

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

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canadian Domestic Substances List (DSL)

Chemical name: Water CAS: 7732-18-5

Chemical name: 3,6-Acridinediamine, N,N,N',N'-tetramethyl-, monohydrochloride CAS: 65-61-2

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

New Jersey Right To Know Components

Water CAS-No. 7732-18-5

Pennsylvania Right To Know Components

Water CAS-No. 7732-18-5

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards

No SARA Hazards

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SECTION 16: Other information

Preparation information

DISCLAIMER:

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. DeNovix Inc. shall not be held liable for any damage resulting from handling or from contact with the above product