1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Safranin O

Product Number : 70965

CAS-No. : 477-73-6

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Ladd Research
83 Holly Court
Williston, VT 05495
USA

Telephone : 802-658-4961
Fax : 802-660-8859

1.4 Emergency telephone number

Emergency Phone # : +1-703-741-5500 (Chemtrec)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word : Danger

Hazard statement(s) : H318
Causes serious eye damage.

Precautionary statement(s) :

P280
Wear protective gloves/ eye protection/ face protection.
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 or doctor/ physician.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Safranin Y or A
Gossypimine
Cotton Red
Basic Red 2
Safranin T

Formula : C₂₀H₁₉ClN₄
Molecular Weight : 350.84 g/mol
CAS-No. : 477-73-6
EC-No. : 207-518-8

Hazardous components

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,7-Diamino-2,8-dimethyl-5-phenylphenazinium chloride</td>
<td>Eye Dam. 1; H318</td>
<td>-</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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.

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

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable 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, nitrogen oxides (NOₓ), Hydrogen chloride gas

5.3 Advice for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. 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.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters
Contains no substances with occupational exposure limit values.

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 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.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, 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 full-face particle respirator type N100 (US) or type P3 (EN 143) 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
Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance
Form: solid

b) Odour
No data available

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
No data available

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/water
No data available

p) Auto-ignition temperature
No data available

q) Decomposition temperature
No data available

r) Viscosity
No data available

s) Explosive properties
No data available

t) Oxidizing properties
No data available

9.2 Other safety information
No data available

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
No data available

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

11. **TOXICOLOGICAL INFORMATION**

11.1 **Information on toxicological effects**

**Acute toxicity**
no data available

Inhalation: no data available
Dermal: no data available

Skin corrosion/irritation
Serious eye damage/eye irritation
Eyes - rabbit
Result: Severe eye irritation

Respiratory or skin sensitisation
no data available

**Germ cell mutagenicity**
S. typhimurium
Result: positive
Histidine reversion (Ames)

**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.

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

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

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

**Reproductive toxicity**
no data available

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: SG1623000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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

12.6 Other adverse effects
    no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
    Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
    Dispose of as unused product.

14. TRANSPORT INFORMATION

   DOT (US)
    Not dangerous goods

   IMDG
    Not dangerous goods

   IATA
    Not dangerous goods

15. REGULATORY INFORMATION

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

   SARA 313 Components
    SARA 313: 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.

   SARA 311/312 Hazards
    Acute Health Hazard

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

   Pennsylvania Right To Know Components
    3,7-Diamino-2,8-dimethyl-5-phenylphenazinium chloride 477-73-6

   New Jersey Right To Know Components
    3,7-Diamino-2,8-dimethyl-5-phenylphenazinium chloride 477-73-6

   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.

16. OTHER INFORMATION

   Full text of H-Statements referred to under sections 2 and 3.
Eye Dam.  Serious eye damage
H318  Causes serious eye damage.

**HMIS Rating**
Health hazard: 2
Chronic Health Hazard:
Flammability: 0
Physical Hazard: 0

**NFPA Rating**
Health hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0

**Disclaimer**
The information presented is believed to be correct and is the most accurate information available to us at this time. However, Ladd Research makes no warranty, express or implied, and assumes no liability for this information and the product described herein.

Date Prepared: 04/15/2020