

# MATERIAL SAFETY DATA SHEET

## Chemical Product

Product Name: SAFRANINE

For Microscopy

CAS#: - 477-73-6

C.I. No.: Not available.

Synonym: Basic Red 2; Brilliant Safranin BR; C.I. 50240; Safranin; 2,8-

Dimethylphenosafranin

Chemical Name: 3,7-diamino-2,8-dimethyl-5- phenylphenazinium chloride

Chemical Formula: C<sub>20</sub>-H<sub>19</sub>-Cl-N<sub>4</sub>

## Composition and Information on Ingredients

Name	S.K.U	% by Weight
SAFRANINE	GCS-7336	100

## Hazards Identification

### Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

### Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

## First Aid Measures

### Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

### Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

### Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial

cream. Seek medical attention.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

**Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

## Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available

Products of Combustion: These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...), halogenated compounds.

**Fire Hazards in Presence of Various Substances:**

Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: May decompose if heated.

Special Remarks on Explosion Hazards: Not available.

## Accidental Release Measures

**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

## Handling and Storage

**Precautions:**

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. In case of insufficient ventilation, wear suitable

respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

#### Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area.

## Exposure Controls/Personal Protection

#### Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

#### Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

#### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

## Physical and Chemical Properties

#### Physical state and appearance

: **Solid.**

Odor	: Not available.
Taste	: Not available.
Molecular Weight	: 350.85 g/mole
Color	: Brown. (Dark.)
pH (1% soln/water)	: Not available.
Boiling Point	: Not available.
Melting Point	: Decomposition
temperature: >240°C (464°F)	
Critical Temperature	: Not available.
Specific Gravity	: Not available.
Vapor Pressure	: Not applicable.
Vapor Density	: Not available.
Volatility	: Not available.
Odor Threshold	: Not available.
Water/Oil Dist. Coeff.	: Not available.
Ionicity (in Water)	: Cationic.
Dispersion Properties	: See solubility in water.
Solubility	: Soluble in cold water,
hot water.	

## Stability and Reactivity Data

Stability: The product is stable.  
Instability Temperature: Not available.  
Conditions of Instability: Excess heat, Incompatible materials  
Incompatibility with various substances:  
Reactive with oxidizing agents. Corrosivity: Non-corrosive in presence of glass.  
Special Remarks on Reactivity: Not available.  
Special Remarks on Corrosivity: Not available.  
Polymerization: Will not occur.

## Toxicological Information

Routes of Entry:  
Inhalation.  
Ingestion.  
Toxicity to Animals:  
LD50: Not available. LC50: Not available.  
Chronic Effects on Humans: MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.  
Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

### Special Remarks on Toxicity to Animals:

Lowest Published Lethal Dose: LDL[Mouse] - Route: Oral; Dose: 1600 mg/kg.  
Special Remarks on Chronic Effects on Humans: May affect genetic material (mutagenic)  
Special Remarks on other Toxic Effects on Humans: Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation. This product contains a cationic dye. It can cause permanent injury to the cornea and conjunctiva. Injury can range in severity from conjunctival edema to, hyperemia and purulent discharge to total opacification and even necrosis and sloughing of corneal stroma. Inhalation: Causes respiratory tract irritation. Ingestion: May cause gastrointestinal irritation with nausea, vomiting, and diarrhea. The toxicological properties of this substance have not been fully investigated.

## Ecological Information

Ecotoxicity: Not available.  
BOD5 and COD: Not available

Products  
of  
Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

## Disposal Considerations

### Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## Transformation Information

Land transport (ADR-RID)

General information: Not regulated

Sea transport (IMDG) [English only]

General information:

Not regulated

Air transport (ICAO-IATA)

[English only]

General information:

Not regulated

## Other Regulatory Information

Federal and State Regulations: TSCA 8(b)

inventory: Safranin O Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

### Other Classifications:

**WHMIS (Canada): Not controlled under WHMIS (Canada).**

### DSCL (EEC):

R38- Irritating to skin. R41- Risk of serious damage to eyes. S2- Keep out of the reach of children. S24/25- Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S39- Wear eye/face protection. S46- If swallowed, seek medical advice immediately and show this

container or label.

**HMIS (U.S.A.):**

Health Hazard: 2

**Fire Hazard: 1**

Reactivity: 0

**Personal Protection: E**

National Fire Protection Association (U.S.A.):

**Health: 2**

Flammability: 1

**Reactivity: 0**

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

**Additional Information**



References: Not available.

Other Special Considerations: Not available.

## ***Disclaimer:***

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