SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FD&C Yellow 5 Food Dye

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word DANGER

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Sensitization, skin (Category 1). May cause an allergic skin reaction (H317). Avoid breathing dust or fumes (P261).

Hazard class: Sensitization, respiratory (Category 1). May cause allergy or asthma symptoms or breathing difficulties if inhaled (H334).

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>Formula</th>
<th>Weight Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>FD&amp;C yellow 5 food dye</td>
<td>1934-21-0</td>
<td>C_{16}H_{9}N_{4}Na_{3}O_{9}S_{2}</td>
<td>534.37</td>
</tr>
</tbody>
</table>

Synonyms: Acid yellow 23; Atul tartrazine; Tartran yellow; Tartrazine; C.I. 19140

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician (P311).

If inhaled: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing (P304 +P341).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Rinse cautiously with water for several minutes (P302+P351). Wash contaminated clothing before reuse (P363).

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Place spilled solid in sealed bag or appropriate waste disposal container. See Sections 8 and 13 for further information.
SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous or Organic #9. Store with dyes, indicators and stains.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling. Contaminated clothing should not be allowed out of the workplace (P272). In case of inadequate ventilation, wear respiratory protection (P285).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Yellow solid. Odorless.
Soluble: Water
Absorbance maximum: 427 nm
Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Skin sensitizer, irritating to eyes and skin.
Chronic effects: N.A.
Target organs: May be reproductive hazard based on animal data.

ORL-RAT LD$_{50}$: 12,750 mg/kg
IHL-RAT LC$_{50}$: N.A.
SKN-RBT LD$_{50}$: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed: FD&C Yellow 5.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 21, 2014

© 2014 Flinn Scientific, Inc. All Rights Reserved.
SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FD&C Red 3 Food Dye

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Synonyms: Acid red 51; Food red 14; Erythrosin B; C.I. 45430

SECTION 2 — HAZARDS IDENTIFICATION

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>Formula</th>
<th>Formula Weight</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>FD&amp;C red #3</td>
<td>16423-68-0</td>
<td>C₂₀H₆I₄Na₂O₅</td>
<td>879.92</td>
<td></td>
</tr>
</tbody>
</table>

Synonyms: Acid red 51; Food red 14; Erythrosin B; C.I. 45430

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None

established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Place spilled solid in sealed bag or appropriate waste disposal container. See Sections 8 and 13 for further information.
SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous or Organic #9. Store with dyes, indicators and stains.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Dark red solid. Odorless. Absorbance maximum: 530 nm
Soluble: Cold water and methyl alcohol Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant. ORL-RAT LD50: 1840 mg/kg
Chronic effects: Hazardous in case of ingestion. IHL-RAT LC50: N.A.
Target organs: Lungs, nervous system, mucous membranes. SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding. Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed: FD&C Red 3.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 21, 2014
Safety Data Sheet

SECTION 1: Identification

1.1. Product Identifier

   **Trade Name or Designation:** Indigo Carmine (FD&C Blue #2)

   **Product Number:** RDCI0050
   **Other Identifying Product Numbers:** RDCI0050-100B1, RDCI0050-25F1

1.2. Recommended Use and Restrictions on Use

   General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

   **Company:** Ricca Chemical Company
   **Address:** 448 West Fork Drive
               Arlington, TX 76012 USA
   **Telephone:** 888-467-4222

1.4. Emergency Telephone Number (24 hr)

   CHEMTREC (USA) 800-424-9300
   CHEMTREC (International) 1+ 703-527-3887

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

   For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Category</th>
<th>Hazard Statement</th>
<th>Precautionary Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity - Oral</td>
<td>Category 4</td>
<td>H302</td>
<td>P264, P270, P301+P312, P330, P501</td>
</tr>
<tr>
<td>Respiratory Sensitizer</td>
<td>Category 1</td>
<td>H334</td>
<td>P261, P285, P304+P341, P342+P311, P501</td>
</tr>
<tr>
<td>Skin Sensitizer</td>
<td>Category 1</td>
<td>H317</td>
<td>P261, P272, P280, P302+P352, P332+P313, P321, P363, P501</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>Category 2</td>
<td>H341</td>
<td>P201, P202, P280, P308+P313, P405, P501</td>
</tr>
<tr>
<td>Hazardous to the Aquatic Environment (Acute)</td>
<td>Category 3</td>
<td>H402</td>
<td>P273, P501</td>
</tr>
</tbody>
</table>

Product Number: RDCI0050
## 2.2. GHS Label Elements

### Pictograms:

- ![Pictogram](image)
- ![Pictogram](image)

**Signal Word:** Danger

### Hazard Statements:

<table>
<thead>
<tr>
<th>Hazard Number</th>
<th>Hazard Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>H334</td>
<td>May cause allergy or asthma symptoms or breathing difficulties if inhaled.</td>
</tr>
<tr>
<td>H341</td>
<td>Suspected of causing genetic defects.</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life.</td>
</tr>
</tbody>
</table>

### Precautionary Statements:

<table>
<thead>
<tr>
<th>Precautionary Number</th>
<th>Precautionary Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>P201</td>
<td>Obtain special instructions before use.</td>
</tr>
<tr>
<td>P202</td>
<td>Do not handle until all safety precautions have been read and understood.</td>
</tr>
<tr>
<td>P261</td>
<td>Avoid breathing dust, fumes or mist.</td>
</tr>
<tr>
<td>P264</td>
<td>Wash arms, hands and face thoroughly after handling.</td>
</tr>
<tr>
<td>P270</td>
<td>Do not eat, drink or smoke when using this product.</td>
</tr>
<tr>
<td>P272</td>
<td>Contaminated work clothing must not be allowed out of the workplace.</td>
</tr>
<tr>
<td>P273</td>
<td>Avoid release to the environment.</td>
</tr>
<tr>
<td>P280</td>
<td>Wear protective gloves and eye protection.</td>
</tr>
<tr>
<td>P285</td>
<td>In case of inadequate ventilation wear respiratory protection.</td>
</tr>
<tr>
<td>P301+P312</td>
<td>IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.</td>
</tr>
<tr>
<td>P302+P352</td>
<td>IF ON SKIN: Wash with plenty of soap and water.</td>
</tr>
<tr>
<td>P304+P341</td>
<td>IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.</td>
</tr>
<tr>
<td>P308+P313</td>
<td>IF exposed or concerned: Get medical attention.</td>
</tr>
<tr>
<td>P321</td>
<td>Specific treatment (Wash areas of contact with water).</td>
</tr>
<tr>
<td>P330</td>
<td>Rinse mouth.</td>
</tr>
<tr>
<td>P332+P313</td>
<td>If skin irritation occurs: Get medical attention.</td>
</tr>
<tr>
<td>P342+P311</td>
<td>If experiencing respiratory symptoms: Call a POISON CENTER or physician.</td>
</tr>
<tr>
<td>P363</td>
<td>Wash contaminated clothing before reuse.</td>
</tr>
<tr>
<td>P405</td>
<td>Store locked up.</td>
</tr>
<tr>
<td>P501</td>
<td>Dispose of contents in accordance with local, state, federal and international regulations.</td>
</tr>
</tbody>
</table>
Safety Data Sheet

2.3. WHMIS Classification
WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

2.4. Hazards not Otherwise Classified or Covered by GHS
Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Formula</th>
<th>Molecular Weight</th>
<th>CAS Number</th>
<th>Weight%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigo Carmine</td>
<td>C₆H₈N₂Na₂O₈S₂</td>
<td>466.35 g/mol</td>
<td>860-22-0</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

SECTION 4: First-Aid Measures

4.1. General First Aid Information

**Eye Contact:** May cause irritation, redness, pain, and tearing.

**Inhalation:** IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

**Skin Contact:** IF ON SKIN: Wash with plenty of soap and water. May cause irritation, allergic reaction and rash.

**Ingestion:** IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Dilute with water or milk. Call a physician if necessary.

4.2. Most Important Symptoms and Effects, Acute and Delayed
CAUTION. May be harmful if swallowed or inhaled. May cause irritation to the skin, eyes and respiratory tract. Wash areas of contact with water. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, allergic reaction and rash.

4.3. Medical Attention or Special Treatment Needed
Specific treatment (Wash areas of contact with water).

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media
Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture
Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment for Firefighters
Use protective clothing and breathing equipment appropriate for the surrounding fire.
SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

6.2. Cleanup and Containment Methods and Materials
Pick up in a manner that does not generate dust. Powder may be moistened with water to aid in the clean-up.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions
Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

SECTION 8: Exposure Controls / Personal Protection

8.1. Control Parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Limit Type</th>
<th>Country</th>
<th>Exposure Limit</th>
<th>Information Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data not available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure Controls
Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.
Respiratory Protection: In case of inadequate ventilation wear respiratory protection. A system of local or general exhaust is recommended. If necessary, wear a dust mask respirator to minimize exposure to dust particles.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves.
Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment
Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection. A system of local or general exhaust is recommended. If necessary, wear a dust mask respirator to minimize exposure to dust particles. Chemical resistant gloves. Safety glasses or goggles.
Safety Data Sheet

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

- **Appearance:** Dark blue solid
- **Physical State:** Solid
- **Odor:** Data not available.
- **Odor Threshold:** Data not available.
- **pH:** Data not available.
- **Melting/Freezing Point:** Data not available.
- **Initial Boiling Point /Range:** Data not available.
- **Flash Point:** Data not available.
- **Evaporation Rate:** Data not available.
- **Flammability:** Data not available.
- **Flammability/Explosive Limits:** Data not available.
- **Vapor Pressure:** Data not available.
- **Vapor Density:** Data not available.
- **Relative Density:** Data not available.
- **Solubility:** Data not available.
- **Partition Coefficient** *(n-Octanol/Water):* Data not available.
- **Auto-Ignition Temperature:** Data not available.
- **Decomposition Temperature:** Data not available.
- **Viscosity:** Data not available.
- **Explosive Properties:** Data not available.
- **Oxidizing Properties:** Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage. Light sensitive.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

- Strong oxidizers

10.4. Hazardous Decomposition Products

Will not occur.
SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

**Acute Toxicity - Oral Exposure:**
Harmful if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. Dispose of contents in accordance with local, state, federal and international regulations.

**Acute Toxicity - Dermal Exposure:**
Not applicable.

**Acute Toxicity - Inhalation Exposure:**
Not applicable.

**Acute Toxicity - Other Information:**
LD50, Oral, Rat: 2000 mg/kg, details of toxic effects not reported other than lethal dose value. Investigated as a tumorigen and mutagen.

**Skin Corrosion and Irritation:**
Not applicable.

**Serious Eye Damage and Irritation:**
Not applicable.

**Respiratory Sensitization:**
May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing dust, fumes or mist. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.

**Skin Sensitization:**
May cause an allergic skin reaction. Avoid breathing dust, fumes or mist. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Specific treatment (Wash areas of contact with water). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

**Germ Cell Mutagenicity:**
Suspected of causing genetic defects. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Carcinogenicity:**
Not applicable.

**Reproductive Toxicity:**
Not applicable.

**Specific Target Organ Toxicity from Single Exposure:**
Not applicable.
Safety Data Sheet

Specific Target Organ Toxicity from Repeated Exposure:
Not applicable.

Aspiration Hazard:
Not applicable.

Additional Toxicology Information:
Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity
Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability
Data not available.

12.3. Bioaccumulative Potential
Data not available.

12.4. Mobility in Soil
Data not available.

12.5. Other Adverse Ecological Effects
Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods
Data not available.

SECTION 14: Transportation Information

14.1. Transportation by Land - Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.
Safety Data Sheet

Not regulated according to IATA Regulations.

SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards
Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances
Not listed.

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals
Not listed.

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)
Not listed.

15.5. Massachusetts Right-to-Know Substance List
Not listed.

15.6. Pennsylvania Right-to-Know Hazardous Substances
Not listed.

15.7. New Jersey Worker and Community Right-to-Know Components
Not listed.

15.8. California Proposition 65
Not listed.

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)
Indigo Carmine (CAS # 860-22-0): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List
Indigo Carmine (CAS # 860-22-0): Present
Safety Data Sheet

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)
Not listed.

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Harmful if swallowed. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing genetic defects. Harmful to aquatic life.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Get medical attention. Specific treatment (Wash areas of contact with water). Rinse mouth. If skin irritation occurs: Get medical attention. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

- **Canadian Carcinogenicity Hazard Class:** Not Applicable.
- **Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.
- **Health Hazards Not Otherwise Classified (HHNOC):** Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

- **Health:** 1
- **Flammability:** 0
- **Reactivity:** 0
- **Special Hazard:** 0

Product Number: RDCI0050

Page 9 of 10
16.4. Document Revision

Last Revision Date: 5/1/2015

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.
SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FD&C Green 3 Food Dye or Fast Green FCF

Flinn Scientific, Inc.  P.O. Box 219, Batavia, IL  60510  (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word   WARNING

Pictograms

NFPA CODE

None

established

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Germ cell mutagenicity (Category 2). Suspected of causing genetic defects (H341). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>Formula</th>
<th>Weight Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast green FCF</td>
<td>2353-45-9</td>
<td>C_{37}H_{34}O_{10}N_{2}Na_{2}S_{3}</td>
<td>808.85</td>
</tr>
</tbody>
</table>

Synonyms: FD&C Green 3; C.I. 42053

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None

established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Place spilled solid in a sealed bag or appropriate waste disposal container. See Sections 8 and 13 for further information.
SECTION 7 — HANDLING AND STORAGE


SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Will stain skin, clothing, and surfaces.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES


SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with oxidizing agents. Shelf life: Good, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A. Chronic effects: Possible mutagen. Target organs: N.A. ORL-RAT LD₅₀: >2 g/kg IHL-RAT LC₅₀: N.A. SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding. Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (219-091-5).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 21, 2014

© 2014 Flinn Scientific, Inc. All Rights Reserved.
Safety Data Sheet (SDS)

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FD&C Red 40 Food Dye

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>Formula</th>
<th>Formula Weight</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>FD&amp;C red #40</td>
<td>25956-17-6</td>
<td>C_{18}H_{14}N_{2}O_{8}S_{2}Na</td>
<td>496.42</td>
<td></td>
</tr>
</tbody>
</table>

Synonyms: Allura red; Food red 17; C.I. 16035

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Place spilled solid in sealed bag or appropriate waste disposal container. See Sections 8 and 13 for further information.
SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous or Organic #9. Store with dyes, indicators and stains.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Dark red-brown solid. Odorless. Absorbance maximum: 504nm
Soluble: Water Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritating to skin and eyes. ORL-RAT LD₅₀: >10,000 mg/kg
Chronic effects: N.A. IHL-RAT LC₅₀: N.A.
Target organs: May be reproductive hazard based on animal data. SKN-RBT LD₅₀: >10,000 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding. Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed: FD&C Red 40.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: February 6, 2014
FD&C Yellow 6 Food Dye

Flinn Scientific, Inc.  P.O. Box 219,  Batavia, IL  60510  (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>Formula</th>
<th>Formula Weight</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>FD&amp;C yellow 6 food dye</td>
<td>2783-94-0</td>
<td>C_{16}H_{10}N_{2}Na_{2}O_{7}S_{2}</td>
<td>452.36</td>
<td></td>
</tr>
</tbody>
</table>

Synonyms: Sunset yellow FCF; Orange-yellow S; C.I. 15985

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). If eye irritation persists: Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Place spilled solid in sealed bag or appropriate waste disposal container. See Sections 8 and 13 for further information.
SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous or Organic #9. Store with dyes, indicators and stains. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271). Will stain skin, clothing, and surfaces.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Red solid. Odorless. Absorbance maximum: 429 nm
Soluble: Water Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant. ORL-RAT LD₅₀: 10,000 mg/kg
Chronic effects: N.A. IHL-RAT LC₉₀: N.A.
Target organs: N.A. SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding. Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed: FD&C Yellow 6.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: March 25, 2014
SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FD&C Blue 1 Food Dye

Flinn Scientific, Inc.  P.O. Box 219, Batavia, IL  60510 (800) 452-1261
CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>Formula</th>
<th>Weight Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>FD&amp;C blue 1 food dye</td>
<td>3844-45-9</td>
<td>C₃₇H₃₄N₂O₉S₃Na₂</td>
<td>792.84</td>
</tr>
</tbody>
</table>

Synonyms: Brilliant blue FCF; Acid blue 9; C.I. 42090

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

© 2014 Flinn Scientific, Inc. All Rights Reserved.
SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous or Organic #9. Store with dyes, indicators and stains.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Dark reddish-purple solid. Odorless. Absorbance maximum: 628nm
Soluble: Water and alcohol Specific gravity: 0.65
Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with oxidizers. Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant. ORL-RAT LD₅₀: N.A.
Chronic effects: N.A. IHL-RAT LC₅₀: N.A.
Target organs: N.A. SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding. Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed: FD&C Blue 1.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

Revision Date: February 6, 2014

© 2014 Flinn Scientific, Inc. All Rights Reserved.