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>
2.2. GHS Label Elements

Pictograms:

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>C₁₆H₈N₂Na₂O₈S₂</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 goggle.
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.
11. 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.
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:
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.