## Section 1. Identification of the Substance/Mixture and the Company

| 1.1 Product Identifier | **Product Name:** Luxol Fast Blue  
**Solution Product Number:** HLFB |
|------------------------|--------------------------------|

| 1.2 Intended use | **EN:** Laboratory reagent. For professional use only.  
**DA:** Laboratoriereagens. Kun til professionelt brug.  
**DE:** Laboratoriumreagens. Alleen voor professioneel gebruik.  
**EL:** Αντιδραστήριο εργαστηρίου. Για επαγγελματική χρήση μόνο.  
**ES:** Reactivo de laboratorio. Sólo para uso profesional.  
**FR:** Réactif de laboratoire. Pour un usage professionnel uniquement.  
**IT:** Laboratorio di reagente. Solo per uso professionale.  
**NL:** Laboratoriumreagens. Alleen voor professioneel gebruik.  
**PT:** Reagente de laboratório. Para uso profissional.  
**SV:** Laboratoriereagens. Endast för yrkesmässig användning. |
|-------------------|------------------------------------------------|

| 1.3 Details of the supplier of the safety data sheet | **Manufacturer:** Teomics, LLC.  
**Address:** Energy Research Park  
5000 Gulf Freeway, Bldg 5 (114)  
Houston, Texas 77023  
**Phone Number:** 800-397-3010  
**e-mail:** msds@teomics.com  
**Website:** teomics.com |
|-----------------------------------------------------|--------------------------------------------------------------------------------|

## Section 2. Hazards Identification

| 2.1 GHS Classification | Flammable liquids (Category 2) – H225  
Skin irritation (Category 2) – H315  
Eye irritation (Category 2A) – H319  
Specific target organ toxicity (Category 3), Central nervous system – H336 |
|------------------------|---------------------------------------------------------------------|

**Classification: Directive 1999/45/EC**

- **F R11, R36 R67; S7, S16, S24/25 S26 S45**  
**EN:** Highly flammable  
**DA:** Meget brandfarlig  
**DE:** Leichtentzündlich  
**EL:** Πολύ εύφλεκτο  
**ES:** Fácilmente inflamable  
**FR:** Facilement inflammable  
**IT:** Facilmente infiammabile  
**NL:** Licht ontvlambaar  
**PT:** Facilmente inflamável  
**SV:** Mycket brandfarligt

For full text of R- & S- phrases: see Section 15.
2.2 Label Elements

Pictogram(s):

Signal word: Danger

Hazard statement(s):
- H226 – Flammable liquid and vapour
- H319 – Causes serious eye irritation
- H315 – Causes skin irritation
- H336 – May cause drowsiness or dizziness

Precautionary statement(s):
- P210 – Keep away from heat/sparks/open flames/hot surfaces – No smoking
- P302+P352 – IF ON SKIN: Wash with plenty of soap and water
- P305+P351 – IF IN EYES: Rinse cautiously with water for several minutes.

NFPA Scale: 0-4

HMIS (U.S.A.) Scale: 0-4

HEALTH 1
FLAMMABILITY 3
PHYSICAL HAZARD 0
PERSONAL PROTECTION G

2.3 Other Hazards

PBT: This mixture does not contain any substances that are assessed to be a PBT.

vPvB: This mixture does not contain any substances that are assessed to be a vPvB.

Section 3. Composition and Information on Ingredients

3.2 Chemical Description: Mixture

*May contain additional non-hazardous proprietary ingredients.

*May contain additional active ingredients at concentrations <0.1%w/v.

<table>
<thead>
<tr>
<th>Hazardous Ingredients:</th>
<th>CAS#</th>
<th>EC#</th>
<th>GHS Symbols</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>200-578-6</td>
<td><img src="image" alt="Flammable liquid and vapour" /> DANGER 2 H225 Highly flammable liquid and vapour.</td>
<td>≤ 86</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>67-63-0</td>
<td>200-661-7</td>
<td><img src="image" alt="Causes serious eye irritation" /> WARNING 2. H319 Causes serious eye irritation. 3. H336 May cause drowsiness or dizziness.</td>
<td>≤ 3</td>
</tr>
<tr>
<td>Acetic Acid</td>
<td>64-19-7</td>
<td>200-580-7</td>
<td><img src="image" alt="Flammable liquid and vapour" /> DANGER 3 H226 Highly flammable liquid and vapour.</td>
<td>≤ 0.5</td>
</tr>
</tbody>
</table>
Section 4. First Aid Measures

4.1 Description of first aid measures

Eye Contact: Check for and remove contact lenses. Immediately flush eyes with copious amounts of water. Get Medical attention if irritation persists.

Skin Contact: Remove contaminated clothing and wash contact area with mild soap and copious amounts of water. Get medical attention if irritation develops.

Inhalation: If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms worsen.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as collar, tie, belt or waistband. Get immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

See section 2.2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5. Fire Fighting Measures

5.1 Extinguishing Media

Extinguish fire using water spray, carbon dioxide, chemical foam, or dry chemical.

5.2 Special hazards arising from the substance or mixture

None

5.3 Advice for firefighters

As with any fire, wear personal protection equipment, including a self-contained breathing apparatus (S.C.B.A.)

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear chemical resistant clothing, gloves, and eye protection. Wear NIOSH/MSHA approved breathing apparatus.

6.2 Environmental precautions

Keep material away from heat, flame, ignition sources, and reactive materials. Don’t allow product to enter drain.

6.3 Methods and materials for containment and cleaning up

Wipe up or absorb spill using inert absorbent and place in a suitable waste container for disposal.

Section 7. Handling and Storage

7.1 Precautions for safe handling.

Avoid contact with skin and eyes. Wash thoroughly after handling. Avoid breathing vapor.

7.2 Conditions for safe storage, including any incompatibilities.

Store in well ventilated area. Keep container tightly closed. Store at 15-30°C.

7.3 Specific end use(s).

See section 1.2
Section 8. Exposure Controls / Personal Protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Exposure Limits:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol:</td>
</tr>
<tr>
<td>NIOSH REL: TWA 400 ppm (980 mg/m³) ST 500 ppm (1225 mg/m³)</td>
</tr>
<tr>
<td>OSHA PEL: TWA 400 ppm (980 mg/m³)</td>
</tr>
<tr>
<td>ACGIH TLV: TWA 200 ppm STEL 400 ppm</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

<table>
<thead>
<tr>
<th>Personal Protective Equipment (PPE):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye/Face protection.</td>
</tr>
<tr>
<td>Safety glasses or goggles are required.</td>
</tr>
<tr>
<td>Skin protection.</td>
</tr>
<tr>
<td>Protective clothing is required.</td>
</tr>
<tr>
<td>Hand protection.</td>
</tr>
<tr>
<td>Chemical resistant gloves are required.</td>
</tr>
<tr>
<td>Glove material must be resistant to the components of this product.</td>
</tr>
<tr>
<td>Consult glove manufacturer for specific recommendations of appropriate material and thickness of glove.</td>
</tr>
<tr>
<td>Respiratory protection.</td>
</tr>
<tr>
<td>Avoid breathing vapor.</td>
</tr>
<tr>
<td>Environmental exposure controls.</td>
</tr>
<tr>
<td>Avoid releasing large quantities into the environment.</td>
</tr>
<tr>
<td>No additional information.</td>
</tr>
</tbody>
</table>

Engineering Controls

Working area should be adequately large and well ventilated to prevent concentration of vapors. Provide mechanical exhaust ventilation or other engineering controls to keep airborne concentrations of vapors below their respective threshold limits.

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Dark Blue</td>
</tr>
<tr>
<td>Odor</td>
<td>Strong alcohol odor</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Unknown</td>
</tr>
<tr>
<td>pH</td>
<td>Unknown</td>
</tr>
<tr>
<td>Melting Point/ Freezing Point</td>
<td>Unknown</td>
</tr>
<tr>
<td>Initial Boiling Point</td>
<td>Unknown</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Unknown</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Unknown</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Unknown</td>
</tr>
<tr>
<td>Upper/Lower Flammability Limits</td>
<td>Unknown</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Unknown</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Unknown</td>
</tr>
<tr>
<td>Relative Density</td>
<td>Unknown</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Water</td>
</tr>
<tr>
<td>Partition Coefficient: n-octanol/water</td>
<td>Unknown</td>
</tr>
</tbody>
</table>
Auto-Ignition Temperature: Unknown
Decomposition Temperature: Unknown
Viscosity: Unknown
Explosive Properties: Not explosive.
Oxidizing Properties: Unknown

Section 10. Stability and Reactivity

10.1 Reactivity: No relevant data available.
10.2 Chemical Stability: Stable under normal temperatures and pressures.
10.3 Possibility of Hazardous Reactions: No hazardous reactions known.
10.4 Conditions to Avoid: Fire, static electricity, direct sunlight.
10.5 Incompatible Materials: Strong oxidizers, sparks or open flame.
10.6 Hazardous Decomposition Materials: Carbon monoxide, carbon dioxide.

Section 11. Toxicological Information

11.1 Information on Toxicological Effects: 
   Acute Toxicity: No relevant data available.
   Skin Corrosion/Irritation: Irritating to skin and mucous membranes.
   Serious Eye Damage/Irritation: Seriously Irritating to eye.
   Respiratory or skin sensitization: No relevant data available.
   Germ Cell Mutagenicity: No relevant data available.

   Carcinogenicity: 
   International Agency for Research on Cancer (IARC). Isopropyl Alcohol is listed as Group 3 – not Classifiable as to carcinogenicity in humans.
   National Toxicology Program (NTP). None of the components are listed.

Section 12. Ecological Information

12.1 Toxicity: 
   Fish: No relevant studies identified.
   Crustacea: No relevant studies identified.
   Algae/Aquatic Plants: No relevant studies identified.
   Other Organisms: No relevant studies identified.

12.2 Persistence and Degradability: No relevant studies identified.
12.3 Bioaccumulative Potential: No relevant studies identified.
12.4 Mobility in Soil: Miscible in water. May spread in water systems. This component is non-volatile.

Additional Remarks: None.
12.5 Results of PBT and vPvB Assessment: 
   PBT: This mixture does not contain any substances that are assessed to be a PBT.
   vPvB: This mixture does not contain any substances that are assessed to be a vPvB.
### Section 13. Disposal Considerations

<table>
<thead>
<tr>
<th>13.1 Waste Disposal Methods.</th>
<th>Sewage disposal is discouraged. Waste should not be disposed of by release to sewers. Dispose waste in accordance with federal, state and local environmental control regulations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product/Packaging Disposal.</td>
<td>Final decisions on the appropriate waste management method must be in line with local, regional and national regulations.</td>
</tr>
<tr>
<td>Other Disposal Recommendations.</td>
<td>No relevant data available.</td>
</tr>
</tbody>
</table>

### Section 14. Transport Information

| 14.1 UN Number DOT, IATA, IMDG, ADR       | DOT: 1170  
|                                            | ADR/RID: 1170  
|                                            | IMDG: 1170  
|                                            | IATA: 1170  |
| 14.2 UN Proper Shipping Name DOT, IATA, IMDG, ADR | ADR/RID: Ethanol  
|                                            | IMDG: Ethanol  
|                                            | IATA: Ethanol  
|                                            | DOT: Ethanol  |
| 14.3 Transport Hazard Class(es) DOT, IATA, IMDG, ADR | DOT: 3  
|                                            | IATA: 3  
|                                            | IMDG: 3  
|                                            | ADR/RID: 3  |
| 14.4 Packing Group DOT, IATA, IMDG, ADR | ADR/RID: III  
|                                            | IMDG: III  
|                                            | IATA: III  
|                                            | DOT: III  |
| 14.5 Environmental Hazards | Marine Pollutant: No  |
| 14.6 Special Precautions for User | Not applicable.  |

### Section 15. Regulatory Information

<table>
<thead>
<tr>
<th>15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture.</th>
<th>None of the components in this mixture are listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Hazardous Substances; Section 355</td>
<td>None of the components in this mixture are listed.</td>
</tr>
<tr>
<td>Toxic Substances Control Act; TSCA</td>
<td>All of the components in this mixture are listed.</td>
</tr>
<tr>
<td>California Proposition 65</td>
<td>None of the components in this mixture are listed.</td>
</tr>
</tbody>
</table>
| Right To Know Components                                                                       | Ethanol  
| Massachutes                                                                                     |   
|  Pennsylvania                                                                                   |   
| New Jersey                                                                                      |   
| Acetic Acid                                                                                     |   |
### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by Teomics, LLC.

<table>
<thead>
<tr>
<th>R phrases</th>
<th></th>
</tr>
</thead>
</table>
| **R11** | EN: Highly flammable.  
DA: Meget brandfarlig.  
DE: Leichtentzündlich.  
EL: Πολύ εύφλεκτο.  
ES: Fácilmente inflamable.  
FR: Facilement inflammable.  
IT: Facilmente infiammabile.  
NL: Licht ontvlambaar.  
PT: Facilmente inflamável.  
SV: Mycket brandfarligt. |

| **R36** | EN: Irritating to eyes.  
DA: Reizt die Augen.  
DE: Irritant pour les yeux.  
IT: Irritante per gli occhi.  
ES: Irrita los ojos.  
FR: Irritant pour les yeux.  
IT: Irritante per gli occhi.  
NL: Irriterend voor de ogen.  
PT: Irritante para os olhos.  
SV: Irriterar ögonen. |

| **R67** | EN: Vapours may cause drowsiness and dizziness.  
DA: Dampe kan give sløvhed og svimmelhed.  
DE: Dämpfe können Schläfrigkeit und Benommenheit verursachen.  
EL: Η εισπνοή ατµών μπορεί να προκαλέσει ψυχαίνη και ξύλη.  
ES: La inhalación de vapores puede provocar somnolencia y vértigo.  
FR: L’inhalation de vapeurs peut provoquer somnolence et vertiges.  
IT: L’inalazione dei vapori può provocare sonnolenza e vertigini.  
NL: Dampen kunnen slaperigheid en duizeligheid veroorzaken.  
PT: Pode provocar sonolência e vertigens, por inalação dos vapores.  
SV: Angor kan göra att man blir dåsig och omtöcknad. |

<table>
<thead>
<tr>
<th>S phrases</th>
<th></th>
</tr>
</thead>
</table>
| **S7** | EN: Keep container tightly closed.  
DA: Emballagen skal holdes tæt lukket.  
DE: Behälter dicht geschlossen halten.  
EL: Το δοχείο να διατηρείται ερµητικά κλεισµένο.  
ES: Manténgase el recipiente bien cerrado.  
FR: Conserver le récipient bien fermé.  
IT: Conservare il recipiente ben chiuso.  
NL: In goed gesloten verpakking bewaren.  
PT: Manter o recipiente bem fechado.  
SV: Förpackningen förvaras väl tillsluten. |

| **S16** | EN: Keep away from sources of ignition - No smoking.  
DA: Holdes væk fra antændelseskilder - Rygning forbudt.  
DE: Von Zündquellen fernhalten - Nicht rauchen.  
EL: Μακριά από πηγές ανάφλεξης - Απομονώθηκε το κάπνισμα.  
ES: Conservar alejado de toda llama o fuente de chispas - No fumar. |
### Section 16. Other Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Teomics, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.