### Section 1 - Product and Company Information

<table>
<thead>
<tr>
<th>Product Name</th>
<th>SIGMA FAST\textsuperscript{TM} 3,3'-Diaminobenzidine Tablets, To prepare 15 ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number</td>
<td>D4418</td>
</tr>
<tr>
<td>Brand</td>
<td>Sigma Chemical</td>
</tr>
<tr>
<td>Company</td>
<td>Sigma-Aldrich</td>
</tr>
<tr>
<td>Street Address</td>
<td>3050 Spruce Street, SAINT LOUIS, MO 63103 US</td>
</tr>
<tr>
<td>City, State, Zip, Country</td>
<td>314 771 5765</td>
</tr>
<tr>
<td>Technical Phone:</td>
<td>800 369 5052</td>
</tr>
<tr>
<td>Fax:</td>
<td>414 273 3650 Ext. 5996</td>
</tr>
</tbody>
</table>

### Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
<th>EC no</th>
<th>Annex I Index Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,3'-DIAMINOBENZIDINE BUFFERED SUBSTRATE TABLET</td>
<td>None</td>
<td>No</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Formula</th>
<th>Synonyms</th>
</tr>
</thead>
</table>

### Section 3 - Hazards Identification

**Emergency Overview**

Harmful
Harmful if swallowed. Irritating to eyes, respiratory system and skin.

**HMS Rating**

Health: 2  Flammability: 0  Reactivity: 1

**NFPA Rating**

Health: 2  Flammability: 0  Reactivity: 1

For additional information on toxicity, please refer to Section 11.

### Section 4 - First Aid Measures

**Oral Exposure**

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**Inhalation Exposure**

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

**Dermal Exposure**

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

### Section 5 - Fire Fighting Measures

**Autoignition Temp:** N/A

**Extinguishing Media**

Suitable Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

**Firefighting Equipment**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**Specific Hazard(s)**

Emit toxic fumes under fire conditions.

### Section 6 - Accidental Release Measures

**Procedure to be Followed In Case of Leak or Spill**

Evacuate area.

**Procedure(s) of Personal Precaution(s)**

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

**Methods for Cleaning Up**

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

### Section 7 - Handling and Storage

**Handling**

User Exposure
Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**Storage**

Suitable
Keep tightly closed. Store at -20°C

**Special Requirements**

Light and moisture sensitive.

### Section 8 - Exposure Controls / PPE

**Engineering Controls**

Safety shower and eyewash. Mechanical exhaust required.

**Personal Protective Equipment**

Respiratory
Government approved respirator.

Hand
Compatible chemical-resistant gloves.

Eye
Chemical safety goggles.
Section 9 - Physical/Chemical Properties

**Appearance**
- Physical State: Solid

**Molecular Weight**: N/A

**pH**: N/A
**BP/BP Range**: N/A
**MP/MP Range**: N/A
**Freezing Point**: N/A
**Vapor Pressure**: N/A
**Vapor Density**: N/A
**Saturated Vapor Cons**: N/A
**SG/Density**: N/A
**Flash Point**: N/A
**Odor Threshold**: N/A
**Volatile%**: N/A
**VOC Content**: N/A
**Water Content**: N/A
**Solvent Content**: N/A
**Evaporation Rate**: N/A
**Viscosity**: N/A
**Partition Coefficient**: N/A
**Decomposition Temp.**: N/A
**Flash Point “F”**: N/A
**Flash Point “C”**: N/A
**Explosion Limits**: N/A

**Flammability**: N/A
**Autoignition Temp**: N/A
**Solubility**: N/A

N/A = not available

Section 10 - Stability and Reactivity

**Stability**:
- Stable
**Conditions of Instability**: Sensitive to light
**Conditions to Avoid**: Sensitive to moisture
**Materials to Avoid**: Strong oxidizing agents

**Hazardous Decomposition Products**
- Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen chloride gas.

Section 11 - Toxicological Information

**Hazardous Polymerization**
- Will not occur.

**Route of Exposure**
- **Skin Contact**: Causes skin irritation.
- **Skin Absorption**: May be harmful if absorbed through the skin.
- **Eye Contact**: Causes eye irritation.
- **Inhalation**: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
- **Ingestion**: Harmful if swallowed.

**Signs and Symptoms of Exposure**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Conditions Aggravated by Exposure**
- Although diaminobenzidine is structurally related to benzidine, there is no evidence for the carcinogenicity of diaminobenzidine.

**RTECS Number**: N/A

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

**Appropriate Method of Disposal of Substance or Preparation**
- Contact a licensed professional waste disposal service to dispose of this material.
- Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
- Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

**DOT**
- Proper Shipping Name: None
- Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

**IATA**
- Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

**EU Additional Classification**
- Symbol of Danger: Xn
- Indication of Danger: Harmful
- Risk Statements: R: 22 36/37/38
  - Harmful if swallowed. Irritating to eyes, respiratory system and skin.
- Safety Statements: S: 26 36
  - Do not breathe dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.
US Classification and Labelling Information

Inhalation Hazard
Harmful

Risk Statements
Harmful if swallowed. Irritating to eyes, respiratory system and skin.

Safety Statements
Do not breathe dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

United States Regulatory Information
SARA Listed: No

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: No

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.