



SIGMA-ALDRICH

## Material Safety Data Sheet

Date Printed: 08/31/2004  
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Version 1.30

### Section 1 - Product and Company Information

**Product Name** SIGMA FAST™ 3,3'-Diaminobenzidine Tablets, To prepare 15 ml  
**Product Number** D4418  
**Brand** Sigma Chemical

**Company** Sigma-Aldrich  
**Street Address** 3050 Spruce Street  
**City, State, Zip, Country** SAINT LOUIS, MO 63103 US  
**Technical Phone:** 314 771 5765  
**Fax:** 800 325 5052  
**Emergency Phone:** 414 273 3850 Ext. 5996

### Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
3,3'-DIAMINO BENZIDINE BUFFERED SUBSTRATE TABLET	None	No		

**Formula**  
**Synonyms**

### Section 3 - Hazards Identification

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

**HMIS 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.

### Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. 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

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

**Specific Hazard(s)**  
Emits 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 eye bath. Mechanical exhaust required.

### Personal Protective Equipment

**Respiratory**  
Government approved respirator.  
**Hand**  
Compatible chemical-resistant gloves.  
**Eye**  
Chemical safety goggles.

**General Hygiene Measures**  
Wash thoroughly after handling.

## 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 Conc.** N/A  
**SG/Density** N/A  
**Bulk Density** 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**  
Stable.

**Conditions of Instability**  
Sensitive to light.

**Conditions to Avoid**  
Sensitive to moisture.

**Materials to Avoid**  
Strong oxidizing agents.

### Hazardous Decomposition Products

#### Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen chloride gas.

**Hazardous Polymerization**  
**Hazardous Polymerization**  
Will not occur.

## Section 11 - Toxicological Information

**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: 22 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 Label Text**

**Indication of Danger**

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

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**Section 16 - Other Information**

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**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.